BCI EXHIBIT

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Expert Report

Professor Anthony Saunders

January 8, 2010.

Lehman Brothers Estates, SIPA v. Barclays

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I. Executive Summary

A. Assignment and Qualifications

1. My name is Anthony Saunders. I have been retained by Boies, Schiller & Flexner LLP, counsel for Barclays Capital Inc. ("Barclays") to analyze conditions in global financial markets in September of 2008 when Barclays agreed to acquire certain assets and assume certain liabilities associated with the North American broker/dealer and investment banking business of Lehman Brothers Inc. ("LBI"), in a transaction with Lehman Brothers Holdings Inc. ("LBHI"), LBI, and LB 745 LLC ("LB 745" and, together with LBHI and LBI, "Lehman") (the "Sale Transaction").[1] The opinions I express relate to the Sale Transaction and the September 17, 2008 repurchase agreement between Barclays and LBI in the context of the economic environment in financial markets and institutions during the global financial crisis.[2]

2. I am the John M. Schiff Professor of Finance and former Chairman of the Department of Finance at the Stern School of Business at New York University, where I have taught undergraduate and graduate courses in finance, banking, and other matters since 1978. In addition to my permanent position at NYU, I also have served as a visiting professor at a number of universities throughout the world, including the Stockholm School of Economics (Sweden), the University of Melbourne (Australia),

[1] The terms of the Sale Transaction were negotiated in the days immediately following LBHI's filing for bankruptcy on September 15, 2008. Following a hearing that began on Friday, September 19th, the Transaction was approved by the Court on September 20th and closed on Monday, September 22, 2008.

[2] This matter involves three motions before the Court brought by three Movants: (a) a Motion for an Order . . . Modifying the September 20, 2008 Sale Order and Granting Other Relief (the "Debtor's Motion") brought by the bankruptcy estate of LBHI; (b) a Motion for Relief Pursuant to the Sale Orders or, Alternatively, for Certain Limited Relief Under Rule 60(b) (the "Trustee's Motion") brought by James W. Giddens (the "Trustee") as trustee for the SIPA liquidation of LBI; and (c) a Motion . . . for Relief from Order . . . Authorizing and Approving (A) Sale or Purchased Assets Free and Clear of Liens and Other Interests . . . (the "Committee's Motion") brought by the Official Committee of Unsecured Creditors of LBHI (the "Committee").

INSEAD (Fontainebleau, France), the University of Otago (New Zealand), the University of Bocconi (Milan, Italy), the University of St. Andres (Argentina), the Institute of South East Asian Studies (Singapore), and the Hong Kong University of Science and Technology.

3. Over the past three decades, my academic research has focused on the areas of financial economics that encompass financial markets and institutions, international finance and banking. I am the author or co-author of twelve books on these subjects, including two widely used textbooks on financial markets and institutions. A sixth edition of my textbook, FINANCIAL INSTITUTIONS MANAGEMENT: A RISK MANAGEMENT APPROACH, was published in 2007 by Irwin/McGraw-Hill, and a third edition of my book, CREDIT RISK MEASUREMENT, published by John Wiley & Sons is forthcoming in 2010.[3] I also am the author or co-author of more than ninety published articles. In 2005 and again in 2009, I was ranked first in a listing of the "Most Prolific Authors" in the seven top finance journals over the past fifty years.[4] My research has appeared in every leading academic journal of finance, including the *Journal of Finance*, *Journal of Financial Economics*, *Review of Financial Studies*, *Journal of Banking and Finance*, *Journal of International Money and Finance*, and the *Journal of Money, Credit, and Banking*, among others. I am a former editor of the *Journal of Banking and Finance*

[3] *See* Anthony Saunders and Marcia Cornett (6th Ed. 2007), FINANCIAL INSTITUTIONS MANAGEMENT: A RISK MANAGEMENT APPROACH, Irwin/McGraw-Hill; Anthony Saunders and Linda Allen (3rd Ed. 2010), CREDIT RISK MEASUREMENT: NEW APPROACHES TO VALUE AT RISK AND OTHER PARADIGMS, John Wiley & Sons.

[4] *See* Philip L. Cooley and Jean L. Heck (Mar. 8, 2009), "Most Prolific Authors in the Finance Literature: 1959-2008," Social Science Research Network (SSRN) Working Paper, *available at* http://ssrn.com/abstract=1355675; Philip L. Cooley and Jean L. Heck (2005), "Prolific Authors in the Finance Literature: A Half Century of Contributions," 1 JOURNAL OF FINANCIAL LITERATURE 46-69.

and currently the editor of the *Journal of Financial Markets, Instruments and Institutions*. I also serve as an associate or advisory editor for eight other journals.

4. In addition to my academic and teaching duties, I hold or have held a number of advisory positions with major institutions of banking and finance. Since 1989, I have served on the Board of Academic Consultants of the Federal Reserve System Board of Governors, and I have held consultant positions with the Federal Reserve Banks of New York and Philadelphia. I currently serve as an advisor at the Federal Deposit Insurance Corporation's Center for Financial Research and the Investment Advisory Board of Zurich Financial Services. Previously, I have advised both the US Office of the Comptroller of the Currency and the Research Department of the International Monetary Fund, and I have been a consultant as well to numerous private and governmental banking institutions. Since 2000, I have served on the Nomination Committee for the Nobel Prize in Economics. In 2010, I will assume the (elected) presidency of the Financial Management Association.

5. I hold a B.Sc. degree in Monetary Economics, a M.Sc. in Money and Finance, and a Ph.D., all from the London School of Economics. Additional details regarding my qualifications and experience are given in my *curriculum vitae*, a recent copy of which is attached to this report as Appendix 1.[5]

6. I am being compensated for my work on this matter at my standard hourly rate, which is $650 per hour. I am being assisted by consultants at Finance Scholars Group who are working at my direction and are being compensated at their standard hourly rates.

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[5] Documents examined are listed in Appendix 2. All Exhibits to this report are appended to the end of this report.

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B. Summary of Opinion

7. The purpose of this report is to anticipate and to counter any assertion by the moving parties that there would not have been severe consequences for the estates, their creditors, Lehman employees, customers and counterparties, and the markets generally, if Barclays had not entered into and/or if the Court had not approved the Sale Transaction.

8. The Sale Transaction and related events that give rise to the current dispute took place, for the most part, during September of 2008, in a necessarily compressed time frame and in circumstances of distress and uncertainty that Lehman's lead bankruptcy counsel, Harvey Miller, emphasized at the time:

> Expedition, Your Honor, is mandatory. Events move with the velocity that almost defies comprehension. In this kind of world, form cannot be exalted over substance. The substance of this transaction is to continue a business for the benefit of the general economy, the employees whose lives are at stake and to fit a small piece into the jigsaw puzzle of maintaining a stable economy. We cannot take the risk of rejecting this transaction because of ambiguities, the lack of a piece of paper to support every element of the assets to be transferred, the lack of definition as to particular items. We have to think and we have to act in the same manner that the decisions were made by the government and others over the past week to expend billions and billions of dollars to shore up the economy. Lehman is here because it was necessary to assure LBI's access to the support of the Federal Reserve Bank and the SEC support and to allow LBI access to the window to support the transactions that were pending before there was a run on the bank. To dissipate that effort, by rejecting a transaction that is intended to save jobs, protect customers and enable a relatively smooth transition of the LBI business and bring value to all involved, would be a miscarriage of justice and detrimental to the national interest.

September 19th Hearing Tr. at 60:17-61:13. Mr. Miller also emphasized that, under the circumstances, it was not possible or prudent to "wait for ordered reports, appraisals,

physical inventories, a review of each and every document related to the transaction…." 9/19/08 Hearing Tr. 59:19-25

9. My findings and opinions in this matter address what it was reasonable to believe, both as of September 2008 and as of now, the potential consequences would have been had Barclays not entered into the Asset Purchase Agreement ("APA") dated September 16, 2008 and/or had the Court not approved the Sale Transaction in an Order dated September 20, 2008. My analysis focuses on many of the fundamental considerations warranting approval of the Sale Transaction and demonstrates that those considerations were valid at the time and remain valid based on the evidentiary record. I address what was reasonable to believe at the time, the consequences would have been for: (i) the LBHI and LBI estates and their creditors, (ii) LBI's customers and clients, (iii) employees of LBHI and LBI, (iv) the financial markets generally, and (v) other financial institutions. My findings are based, in part, on an analysis of global financial markets and the condition of major financial institutions during the month of September of 2008 and ensuing months. I summarize my major findings and opinions in the following paragraphs.

10. In September of 2008, conditions in global financial markets were tumultuous and precarious. There was great uncertainty about the value of a wide range of financial assets and about the future direction of asset prices. This uncertainty led to dramatic increases in both actual and anticipated volatility in financial markets. This heightened volatility, along with increased risk aversion, led to a massive "flight to safety," resulting in a severe contraction in trading activity and reduced liquidity in virtually all markets for assets exposed to credit risk. There also was justified concern

about the functioning and viability of a wide range of financial markets, and about the ability of governments to regulate complex financial markets appropriately and adequately. Such concerns led to calls for a complete restructuring of global financial markets and a total overhaul of financial regulatory systems throughout the world.

11. In September of 2008, reflecting the poor and deteriorating conditions in financial markets, the financial condition of virtually every major financial institution was fragile. There was uncertainty about both the strength and the future of almost all financial institutions, about the market values of their assets, equity and debt claims, as well as doubts about their fundamental viability. This uncertainty reflected not only the uncertainty about the marked-to-market value of financial assets, but also uncertainty about financial liabilities, particularly concerning various forms of financial "insurance" that financial firms claimed to have put in place, were entitled to, or had not fully disclosed in their financial statements. As a result, there was uncertainty about the solvency and long-term viability of a wide range of financial institutions. Because of this uncertainty about the true condition of financial firms, acquirers were reluctant to acquire financial intermediaries without government guarantees as a backstop against unknown credit losses.[6]

12. The Court's approval of the Sale Transaction was viewed by many at the time as one of the few "positives" for global financial markets during this critical period of the global economic crisis in September of 2008. As such, it was reasonable to believe at the time (and it is also reasonable to conclude now) that the acquisition had a calming and salutary effect on conditions in financial markets, thereby relieving some of the

[6] There were no government subsidies or guarantees backing the Sale Transaction.

pressure on financial institutions and the global economy. It was reasonable to believe at the time (and it is also reasonable to conclude now) that had Barclays not entered into the Asset Purchase Agreement ("APA") on September 16, 2008 and/or had the Court not approved the final Purchase Agreement, as defined in its Order dated September 20, 2008, financial market conditions would have deteriorated beyond what actually occurred, and at least some of the financial institutions that ultimately survived the crisis would have been even more severely tested than they actually were.

13. At the time of the approval of the Sale Transaction, the Court noted that the primary financial regulators urged that the transaction be approved expeditiously in order to preserve the rapidly eroding value of LBI's assets for the benefit of the estates' claimants, LBI customers, LBI employees and the financial system at large. Indeed, the Honorable James M. Peck, in closing the marathon Sale Transaction hearing, which began the afternoon of September 19th and ended after midnight, noted the extraordinary cooperation among the interested parties, as each pursued a solution that they believed would prevent the deterioration in LBI's value that would have occurred if the Sale Transaction had not been consummated expeditiously (pp. 248-252):

> We must close this deal this weekend not because the markets demand it, although that's certainly a part of it. ... I feel that I have a responsibility to all the creditors, to all of the employees, to all of the customers and to all of you. ... [I]t's very apparent to me that for a transaction of this sort to happen, only Barclays can do it. Only Barclays has the support of the regulators. Only Barclays is prepared to close. Only Barclays can deliver the customer accounts to safe harbors. And the customer property, which is the principal concern of the SIPC trustee...will be best protected by virtue of approving the sale. ...
>
> I am completely satisfied that I am fulfilling my duty as a United States bankruptcy judge in approving this transaction and in finding that there is no better or alternative transaction for these assets, that the consequences of not approving a transaction could prove to be truly disastrous. ...The harm to the

> debtor, its estates, the customers, creditors, generally, the national economy and the global economy could prove to be incalculable.
>
> And so, as to those objectors who say it would be establishing bad precedent to approve this transaction, I say no. This is not bad precedent. To the contrary. It's an extraordinary example … that creative minds working diligently day and night even under the worst of circumstances can create remarkably complicated transactions that preserve value. I am proud to have been part of this process.

14. The Debtor, represented by Weil Gotshal, had stressed these considerations in its Sale Motion and in the testimony that Weil proffered at the September 19 hearing. Sale Motion ¶¶ 7-8, 10-12; 9/19/08 Hearing Tr. 59:11-61:13, 92:25-93:19, 94:13-20, 98:10-12, 101:18-103:1, 144:25-145:4, 146:1-14, 147:1-5, 240:21-241:4, 241:18-24, 244:17-24.

15. Based on my expertise as a financial economist, it is my opinion that it was reasonable for the Court and interested parties to believe at the time (and it is still reasonable to conclude now) that approval of the Sale Transaction was warranted, and that the estates would have been substantially worse off if either Barclays had not proceeded with the Sale Transaction or if the Court had not approved it expeditiously on September 20, 2008. Moreover, it is my opinion that it was reasonable to believe at the time (and it is reasonable to conclude now) that approval of the Sale Transaction would be beneficial to the estates, LBI employees, LBI customers and the financial system at large.

16. Further, it is my opinion that it was reasonable to believe at the time (and it is reasonable to conclude now) that the Sale Transaction would avoid potentially drastic consequences that could have harmed the estates, LBI employees, LBI customers and the entire financial system. Although quantifying with precision what would have happened in financial markets "but for" the acquisition is difficult, my conservative

analysis demonstrates that it was reasonable to believe that the resources available to the estates would have declined substantially if the Sale Transaction had not occurred, and that there would have been major disruption and panic if tens of thousands of LBI account holders did not have the immediate access to their accounts that the Sale Transaction facilitated.

17. Moreover, in my opinion, it was reasonable to believe at the time (and it is reasonable to conclude now) that, but for the acquisition, a broader range of financial markets would have been affected negatively for some period of time, a larger number of financial institutions would have faced insolvency, asset prices would have fallen faster and further than they did, governments would have been forced to intervene in financial markets even more drastically and aggressively than they did, the recession that began in December of 2007 may have been longer and deeper, and economic recovery delayed even further. Because the Sale Transaction at least in part helped to avoid these consequences, Barclays' decision to enter into the original APA (as well as the final Purchase Agreement) and the Court's decision to approve the final Purchase Agreement without delay were immensely beneficial, not only for global financial markets, financial institutions, and the general public, but also for the LBHI estate, the LBI estate, creditors of the estates, and customers, clients, employees and counterparties of LBHI and LBI.

18. The research and analysis underlying the opinion summarized above are based upon the currently available record produced in connection with this litigation, as well as publicly available information. However, I reserve the right to revise my opinions and my expert report to reflect any newly acquired information or issues raised at my deposition. Furthermore, I reserve the right to revise my opinions and expert report

as a result of reflection and reconsideration based upon views expressed by other expert witnesses, if any, or upon further study and information, including, among other things, documentary and testimonial evidence introduced at trial. If asked to testify at trial, I may prepare additional supporting materials related to my findings and opinions, such as summaries, illustrations, tables, charts, and other expository exhibits. If requested to do so by counsel, I may also examine additional issues not addressed in this report and may develop further findings and opinions as a result.

C. Overview of My Report

19. In Section II, I address why the considerations warranting approval of the Sale Transaction were valid at the time and remain valid. I describe a range of possible consequences had Barclays not agreed to the original APA on September 16, 2008 and/or had the Court not approved the Sale Transaction on September 20, 2008. In Appendix 4 to this report, I address the important context of the financial crisis in which the Sale Transaction occurred so as to provide a basis for understanding the potential consequences for the financial markets and institutions had the Sale Transaction not occurred. Moreover, in Appendix 4, I review and analyze the financial condition of major financial institutions in September of 2008, so as to understand the potential consequences for those institutions had the Sale Transaction not occurred.

II. Reasonably Anticipated Consequences Had Barclays Not Acquired Lehman's North American Broker/dealer Businesses

20. Even under normal financial conditions, the enterprise value of a financial institution is fragile and erodes very quickly when faced with insolvency and illiquidity problems. However, the week of September 15th was certainly not normal. The rapid

deterioration of LBI's enterprise value was made even worse by imploding financial markets and the potential insolvency of major financial intermediaries, such as AIG and the Prime Reserve money market fund.[7]

21. In the Debtor's Sale Motion and at the September 19, 2008 Hearing, the Court was informed by the Debtor's Counsel (Weil Gotshal), the Debtor's President (Bart McDade) and the Debtor's financial advisor (Lazard) that LBI was a wasting asset and that the consequences of a delay in consummating a sale would be severe. As stated in ¶ 6 of the Sale Motion:

> The sale of [LBI's] Purchased Assets, is critical to the stabilization of value. Each day that the Purchased Assets are subject to the vagaries and vicissitudes of the marketplace and the impact of bankruptcy diminishes the value of such assets. Time is of the essence....The sale is in the best interests of the Debtors, their employees and their economic stakeholders.

22. As an expert in the management of financial institutions, I agree that during the week of September 15th, it was reasonable to conclude that it was necessary to act expeditiously to sell LBI in order to preserve LBI's enterprise value for its creditors and other stakeholders. Financial institutions typically operate on trust underpinning relationships with counterparties, clients, customers, clearing houses and regulators. During the uncertain days of the week of September 15th, the fragility of this trust was demonstrated when, for example, LBI's counterparties refused to complete their trades, exchanges delayed settlement, and customers closed their accounts, thereby eroding LBI's enterprise value. As Bart McDade stated in his September 2, 2009 deposition (177:11-15):

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[7] Appendix 3 offers a time line of events and policy interventions during the 2007-2009 period. Appendix 4 describes the global financial crisis and its impact on fragile financial markets and institutions.

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> [W]e were unable to operate in the marketplace at the same time. We were being shut at [Depository Trust Corporation] DTC. All our counterparts wouldn't do business with us. We had employees in and out, et cetera. So it was an impossible struggle to manage any assets [to preserve their value].

23. During the week of September 15th, LBI found its liquidity sources evaporating and its banking relationships eroding. Collateral requirements were increasing and clearing banks delayed the release of LBI's cash in settling transactions. In order to manage the risk of its asset portfolio, a broker/dealer must have adequate access to liquid funding in order to clear its trades and to fund its operations. As noted by James Seery in his September 3, 2009 deposition (44:23-46:21):

> A. We had significant concern that JP Morgan, and to a lesser degree Citibank, maybe State Street, would not act as our clearing bank and clear trades. ...
>
> Q. What impact would it have on Lehman Brothers' business if its clearing bank failed to clear trades?
>
> A. There wouldn't be a business.
>
> Q. Why not?
>
> A. Because counterparties count on being able to trade with you, count on the sanctity of that trade, when they say it's done that it is in fact done, and take other financial actions related to the trade that they engaged in. So if the trade is not cleared that implicates all of their other positions and their other actions.

24. Regulators understood that LBI's enterprise value was rapidly eroding during the week of September 15th, as reflected in the cooperation of US regulators, such as the Securities Investment Protector Corporation ("SIPC"), the Federal Reserve Bank ("Fed"), and the Securities and Exchange Commission ("SEC") (see ¶ 12 of the September 17th Sale Motion) in supporting the Sale Transaction.

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25. Based on the information available at the time, I conclude therefore, it was reasonable and prudent to expedite the transaction so as to prevent further erosion in the value of LBI. This conclusion does not change with the benefit of hindsight. LBI's estate would have been worse off if the Sale Transaction had not occurred. Thus, the Court was correct and acted properly in approving the Sale Transaction. That approval could not, at the time, have been based on precise valuation analysis concerning the exact value of the Purchased Assets and Consideration (including Assumed Liabilities). As Mr. Harvey Miller informed the Court on September 19, there was no time to complete such valuation analyses or appraisals for the broad range of assets and liabilities involved in the transaction.

26. Further, at a meeting of the CEOs and top executives of the major financial institutions (e.g., Goldman Sachs, JP Morgan Chase, Merrill Lynch, Morgan Stanley, etc.) called by US Treasury Secretary Hank Paulson, Fed Chairman Benjamin Bernanke and President of the Federal Reserve Bank of New York Timothy Geithner on Friday evening September 12th in order to search for an immediate private sector solution for Lehman's problems, none of the major financial institutions, except Barclays, was willing to participate in a rescue of Lehman. As stated in the August 7, 2009 deposition of Mark Shapiro (152:25-153:14):

> [T]he firm had been shopped all summer and we didn't have a buyer. Obviously, Bank of America, who was the other bidder, had just announced their deal with Merrill Lynch so they were out of the picture. The world felt like it was in a state of virtual collapse. ... Do you see any other people doing a deal with someone else?

27. It is my opinion that it was reasonable to believe that the consequences of a failure of Barclays to step in and complete the Sale Transaction would have been

devastating to LBI's estate, LBHI's estate, employees, customers, counterparties, and, to some extent, the entire financial system. In an attempt to assess these reasonably anticipated potential consequences, I describe what it was reasonable to believe might have happened using the two "but-for scenarios" described below:

"No APA" Scenario: First, I consider what it was reasonable to believe would have happened had Robert Diamond rebuffed Bart McDade's invitation, extended on Sunday evening, September 14th, to entertain the possibility of acquiring Lehman's North American broker/dealer operations in a distressed bankruptcy sale, in place of the much broader transaction the parties previously had attempted to close. That is, I consider what would have been the implications in the but-for world without Barclays' execution of the APA, provision of a $450 million Debtor in Possession ("DIP") credit facility on September 17th, and Barclays' other sources of interim funding made available to LBI during the week of September 15th. Under this scenario, if Barclays had not provided financing to LBI, then LBI would have been dependent upon the Fed's $45 billion repurchase agreement ("repo") extended on Sunday, September 14th.

"No Approval" Scenario: Second, I consider what it was reasonable to believe would have happened had the Court not approved the Sale Transaction on September 20th.[8] Under this but-for scenario, Barclays would have signed the APA, replaced the Fed repo on September 18th and advanced the $450 million DIP credit facility and other loans during the week of September 15th.

28. For each scenario, I consider the reasonably anticipated consequences for the estates and their creditors, financial markets generally and other financial institutions,

[8] The "No Approval" Scenario also includes the possibility that Barclays could have walked away from the deal because provisions of the Clarification letter (final Purchase Agreement) were not agreed to.

as well as the thousands of North American employees, customers and counterparties of LBI.

A. "No APA" Scenario: Barclays Does Not Enter Into the Original APA on September 16th

29. On Monday, September 15th, Lehman's broker/dealer operations confronted a potentially fatal funding crisis. Previously financed largely by funding down-streamed from its parent company LBHI, the bankruptcy filing by LBHI meant LBI no longer could draw on that source of funding. Instead, from the 15th of September onwards, LBI had to fund its financial assets and business operations from other sources. Its options in this regard were extremely limited; understandably, virtually no significant funding was available to LBI through normal commercial channels and mechanisms.

30. Barclays appears to have been the only private investor willing to step forward with DIP financing for LBI to continue operations during the critical week of September 15th, 2008.[9] As even Bryan Marsal, current LBHI CEO admits in his December 22, 2009 deposition (190:10-15): "The question is would we have been able to find a different DIP lender for $200 million on a 5-to-1 ratio. I think so. Based on being in that business I think so. But it would have probably been at 18 to 19 percent cost of capital." In contrast, Barclays' DIP financing for a US dollar loan was at a cost of five percent plus the greater of: either the Prime Rate or the Federal Funds Effective Rate plus 50 basis points. During the week of September 15, 2008, the Prime Rate was 5 percent and the Federal Funds Effective Rate was 2.25 percent.[10] Therefore, the cost of Barclays' DIP financing was only ten percent per annum, considerably below the cost

[9] JP Morgan Chase, LBI's clearing bank, advanced funds (levying increased collateral requirements) in the context of settling transactions, not for general operations.

[10] Source: Federal Reserve Bank of St. Louis, FRED database.

that even Bryan Marsal believed would have been imposed by other lenders, assuming that there had been any other private financial intermediary willing to provide the financing.

31. Indeed, the evidence suggests that alternative funding sources would have been extremely difficult to obtain. Private financial intermediaries were pulling back from Lehman, precipitating a liquidity crisis. In his January 7, 2010 deposition, Harvey Miller stated (11:20-12: 15):

> At the time, it appeared that Lehman would be totally illiquid. The only access to funds was through LBI and the PDCF window at the Fed, I think that's Primary Dealers Credit Facility, which was a window that was set up by the Fed sometime months before that to assist the investment banking community, which Lehman had never used before, and the Fed, the Federal Reserve Bank of New York, had said the window would be open for LBI for a period I think of four days or five days provided the appropriate collateral was given to the Federal Reserve Bank.
>
> So, to get financing ... a negotiation went on with Barclays to do a debtor-in-possession financing ... in this very tumultuous atmosphere.

32. Moreover, Lazard, the financial advisor engaged to analyze Lehman's situation, circulated an internal document (LAZ-B-00003028) on Saturday September 13th that stated that Lehman's "liquidity position has deteriorated significantly in the last three days and absent a sale transaction or extraordinary government intervention, [Lehman] believes it will not be able to open for business on Monday." Indeed, LBI's critical liquidity situation was made apparent at the September 17th hearing (82:10-20):

> Without approval of the immediate ability to utilize the 200 million dollars under the proposed DIP credit agreement, Lehman's operations may cease as early as tonight. The results, including on employees and the value of the estates, would be catastrophic. The debtors would lose substantial benefits of the Barclays sale and likely would not be able to realize on substantial other sales that perhaps will occur in the future. Ability to maintain the debtor's business relationships with its customers, pay its employees and satisfy its other critical operating expenses is essential to its ability to survive.

33. LBI's liquidity position was so critical, in part, because on September 9th, JP Morgan Chase, LBI's clearing bank, demanded an additional $5 billion in collateral in order to clear LBI's trades. The Lazard September 13, 2008 presentation (LAZ-B-00003028) notes, "A few months ago, JPM required no collateral." Moreover, the JP Morgan CEO Jamie Dimon "indicated to [Lehman's] CEO on Thursday evening September 11, that [LBI] needed to announce a sale transaction by market open Monday September 15 or JPM would immediately discontinue doing business with [LBI] and effectively 'put [LBI] out of business.'" (LAZ-B-00003028). This would have prevented LBI's thousands of customers from accessing their accounts, for all intents and purposes freezing their cash value and further constraining market liquidity.

34. Other banks, such as Citibank, expressed the intention to take similar action in denying liquidity to LBI. In all likelihood, "banks will not provide the funds [on the remaining $4.5 billion on LBI's committed credit facilities] absent a sale transaction." (Lazard September 13, 2008 presentation, LAZ-B-00003028). The Lazard document estimated that Lehman's "minimum cash shortfall on Monday" September 15th would be $16 billion. Moreover, Lazard's presentation notes (LAZ-B-00003028): "Regarding the $19 billion of cash as collateral, JP Morgan and other clearing banks have acted to restrict ... access to such cash." If, as was expected, Lehman suffered "a 2 notch downgrade by [Moody's or S&P, then Lehman] would be required to post an additional $2 billion of cash collateral." (LAZ-B-00003028). This cash collateral demand may well have required an immediate sale of assets by LBI. Knowing LBI's desperate need for cash, interested financial market participants, if any, would have bid only fire sale prices for LBI's assets, further decreasing the estates' recovery rates. Thus, LBI had a critical

need for liquid funds on Monday September 15th that showed no signs of abating during the week. Barclays was the only private enterprise willing to offer substantial additional funds to LBI, and did so in order to preserve LBI's value in anticipation of the Sale Transaction.

35. LBI's liquidity crisis continued to worsen during the week of September 15th, as noted in an email from Ian Lowitt dated September 17th (Sept. 17, 2008 e-mail form I. Lowitt to Gelband, Kirk and Felder regarding "Funding tomorrow"): "Today was very bad with large numbers of surprises and increased requirement of 7 or so billion. Cannot get through tomorrow if not tighter. Not sure what to suggest other than someone makes ensuring great discipline the number one priority....Also need to shrink matched book which as of yesterday was much larger than expected."

36. In addition to LBI's deteriorating condition, the market reaction to the LBHI bankruptcy had dire consequences for LBHI's claimants, LBI's customers and employees, as well as global financial markets and institutions in general. As noted in the January 7, 2010 deposition of Harvey Miller:

> ...the filing of the Lehman Chapter 11 petition was cataclysmic... [7:16-17]
>
> I think I described it at some point in time as a very fluid situation. Things continued to change.
> The market reaction [to the LBHI bankruptcy filing], as I said before was terrible and Wednesday was even worse. Wednesday was, I think a traumatic day for the market. Commercial paper market seized up. Values were being diminished. The word around was that there were massive fails in the brokerage community. It was a very tumultuous time. [13:14-24]

37. As noted in an internal presentation entitled "Default Scenario Liquidation Framework" (page 2) the average daily transaction volume (electronic and derivatives)

year-to-date at Lehman's North American operations was 2,669,961. However, the high transaction volume year to date was 4,222,744. If the Sale Transaction had not occurred and LBI had failed, it was reasonable to anticipate that the transaction demand would have increased even higher than this year-to-date high as customers and counterparties sought to close out their positions.

38. A failure of Barclays to pursue a takeover of Lehman's North American operations, as assumed in the but-for analysis under the "No APA" Scenario, would have left the Fed's $45 billion repo as the only source of funding, apart from whatever intra-day funds clearing banks would have been willing to advance to LBI. Reluctantly, the Federal Reserve System had provided financing to LBI (via a repo which was extended on Sunday night September 14th) in order to keep LBI operating, so as to allow time for an "orderly winding down" of those operations, as stated in the Leventhal Declaration, at ¶ 7: "the New York Fed's commitment to provide overnight funding for LBI was based on the assumption that we were facilitating an orderly wind down of the business."

39. It is unclear from witness testimony and available documentation whether, or for how long, the Federal Reserve would have continued to provide overnight repo financing and whether or not the Fed anticipated an eventual intercession by Barclays when it agreed in the first place to provide overnight financing to LBI on Sunday September 14th.

40. The available evidence suggests that LBI's liquidity position was precarious even with the $45 billion Fed repo, since the Fed's decision to provide daily financing to LBI was intended only to give LBI an opportunity to "wind down" its trading positions in an orderly fashion (or at least in a more orderly fashion than would

have been the case in the event of a sudden, forced liquidation of LBI absent any funding from the Fed). Available evidence and reporting of events indicates that the Fed repo was not intended as anything other than a very short-term source of operating funds for LBI. For example:

- According to the Leventhal Declaration, at ¶ 6: "LBI, the broker/dealer subsidiary of Lehman Holdings, did not commence a Chapter 11 case on September 15th. This represented a carefully thought out decision that would enable LBI to continue to operate so as to facilitate an orderly wind down of its trading positions. To keep LBI operating, however, its operations and payroll had to be funded. The New York Fed agreed to finance LBI overnight."

- There is evidence to suggest that the Fed had a short deadline (as early as September 22nd) for termination of its repo financing. As stated in the letter agreement between the Fed and Barclays dated September 17, 2008: "By no later than the opening of business on Monday, September 22, 2008 ..., Barclays agrees (i) to purchase from the FRBNY, without recourse, the entirety of the FRBNY's position under all of the Agreements for a payment equal to the aggregate outstanding amount then due to the FRBNY under all such Agreements excluding any professional fees, costs or expenses ... and (ii) simultaneously cause the release or termination of the FRBNY's obligations under all Agreements." In exchange, the Federal Reserve Bank of New York agreed to "support the Motion" (paragraph 5) initiating the Sale Transaction.

- The bidding procedures approved by the Court on September 17, 2008, made clear, at the insistence of the Fed, that any potential bidder must agree to replace the Fed's financing of LBI on or before September 22, 2008. Sale Motion Exhibit 1 at Ex. A at paragraph 3. This indicates that, in all likelihood, the Fed would have sought to terminate its repo with LBI as soon as it possibly could do so.

- The evidence suggests that the Fed had a strong preference to end its role as repo counterparty to LBI expeditiously, particularly as the events of the week of September 15th

increased the strain on the Fed's resources. Indeed, prior to the start of the crisis the Federal Reserve System held assets of around $870 billion.[11] However, the liquidity injections and other interventions undertaken during the crisis increased the size of the Fed's balance sheet dramatically, with potential future implications for monetary policy and inflationary pressures.

- In his January 7, 2010 deposition, Harvey Miller (12:4-8) stated that "the Federal Reserve Bank of New York, had said the [PDCF} window would be open for LBI for a period I think of four days or five days provided the appropriate collateral was given to the Federal Reserve Bank."

41. Had Barclays not re-entered negotiations to acquire LBI, as assumed under the "No APA" Scenario, there would have been no reason for Barclays to replace the Fed's repo. Given the fact that there were no other private market sources of financing for LBI, apart from some highly collateralized intra-day funding from clearing banks, it is not at all clear how the Fed would have extricated itself from the LBI repo as it so clearly wanted to do. I consider two possibilities.

42. First, the Fed could have agreed to continue providing daily financing for some limited period of time prior to a SIPC liquidation of LBI in order to unwind a portion of its trading positions. While the Fed may have hoped that its short-term repo financing would have provided an "orderly" winding down of LBI's positions, in practice these limited financing commitments would have required a large-scale unloading of financial assets in a very short period of time and resulted in customers' rush to close their LBI accounts, with the resulting loss in value to the estate. This would have "inundated [LBI with] massive numbers of transactions," estimated in the September 13th

[11] Ben Bernanke, "The Federal Reserve's Balance Sheet: An Update," October 8, 2009 Speech , http://www.federalreserve.gov/newsevents/speech/bernanke20091008a.htm#ip1.

"Default Scenario: Liquidation Framework" to consist of over 4.2 million daily transactions. (LBHI 008340.)

43. Second, anticipating the SIPC liquidation of LBI, the Fed could have opted instead to cease providing overnight financing sometime during the week of September 15th, the repayment of which was pledged against relatively low quality collateral. Given the many problems at other financial institutions that shortly followed the LBHI bankruptcy, such as AIG, Wachovia, and the Prime Reserve money market mutual fund, to name a few, it is possible absent the Sale Transaction that the Fed would have pressured LBI to repay the Fed loans during the week of September 15th.

44. If the Fed had discontinued its repo financing, it is unlikely that LBI, in the "No APA" Scenario, would have been able to repay the cash loan underlying the Fed repo transaction. Thus, a demand for repayment by the Fed could havè triggered a default, which would have left the Fed to choose between conducting a fire-sale liquidation of LBI's repo collateral or holding on to assets with declining values during volatile market conditions and at a time that the Fed faced many other pressures on its resources due to deteriorating conditions.

45. What is clear is that the Fed, with its balance sheet already rapidly expanding due to its other intervention actions and programs, would have been highly unlikely to provide financing to LBI over the months it took Barclays to effectively liquidate the portfolio of assets received in the Fed repo replacement transaction. The Fed's impatience to end its financing obligations to LBI were explained in the August 19, 2009 deposition of Gerard LaRocca (pages 27-32):

> I get sent over to Lehman Brothers and to sit with the ops guys and told try to be helpful to them, they're dying, they're in – they're in bad shape

> because, you know, JPMorgan had turned off the pipes, banks were pulling lines, counterparties were closing them out, walking away from trades....
>
> I believe it was Monday, Jonathan [Hughes] had alerted me that the Fed was financing Lehman Brothers and they were looking for Barclays to help in some kind of way [to take the Fed's exposure to LBI]....
>
> On the 16th, the Tuesday, Jonathan came back to me again and said, you know, the Fed wants to meet with us, they want us to – I don't remember the exact words – they want us to step into their trade with Lehman Brothers. ...
>
> I participated in a phone call with the Fed on that Tuesday, and ... the urgency was evident...they were anxious, right? Were hoping that we could execute on Wednesday. We told them that we wouldn't be prepared.

Thus, the evidence suggests that the Fed would not have been willing to wait the months necessary to liquidate the repo collateral, as Barclays did, and would instead have tried to liquidate the low quality assets at fire-sale prices.

46. I have seen no evidence to suggest that some private counterparty other than Barclays was willing to replace the Fed as a last-resort source of overnight repo financing to LBI during the week of Sept. 15-19, 2008. Consequently, without the Fed's continued financing, LBI would likely have been forced to fund its own operations through the immediate sale of some portion of its assets. Assuming that it needed approximately $45 billion to finance its daily operations, LBI would have had to attempt to sell off positions with a net fire-sale value of $45 billion. This would have been a substantial portion of LBI's total balance sheet (approximately 69 percent of total assets using the September 12th LBI balance sheet).[12] Such a large volume of trades conducted

[12] This is a conservative estimate of the portion of LBI's assets that would have had to be liquidated to net $45 billion, since the fire-sale valuations of all assets would be substantially below the September 12th marks.

in a fire sale fashion would certainly have had a substantial negative impact on the pricing and valuation of the assets, the volatility of markets for the particular assets, and in particular, the liquidation value of the Lehman estates.[13]

47. The Fed provided repo financing to LBI as a last-resort lending facility because a substantial portion of LBI's assets was deemed by private counterparties to be of insufficient quality to be accepted as collateral.[14] Thus, under the Fed repo, LBI could pledge relatively low quality assets as collateral for overnight financing. In the event of a fire sale of assets by either LBI or the Fed, however, the lowest quality assets of LBI would likely have been among the last to be sold to interested buyers, if they could have been sold at all. Higher quality assets would most likely to have been sold first to fund LBI's operations. Therefore, even if LBI could have succeeded in selling assets sufficient to fund daily operations, the quality of the portfolio of assets remaining to the estates would have deteriorated greatly.

48. Moreover, any inability of LBI to fully fund its employees' salaries would have made it extremely difficult to manage effectively its asset portfolio, prevent assets from deteriorating using risk hedging, or to settle customer claims and trades effectively and accurately. Bryan Marsal, current CEO of LBHI, acknowledged in his December 22, 2009 deposition (188:17-21) that without Barclays' assumption of the Fed repo:

> The jobs [at LBI] would have been jeopardized. The wind-down would have been less smooth. And it probably would have precipitated even a deeper crisis, global crisis, than what was already happening.

---

[13] I undertake a conservative analysis of the losses to the estates under a fire-sale liquidation of LBI in Sections II.D and II.E of this report.

[14] On Sunday September 14, 2008, the Fed relaxed its collateral quality requirements even further, by accepting equities as Fed repo collateral in its transactions with other financial firms, but not with Lehman. LBI ultimately included a substantial quantity of equities in the repo collateral transferred to Barclays, at a time when the value of such equities was especially volatile.

Thus, the absence of Barclays' funding under the "No APA" Scenario would have likely caused the resources available to the estates to decline and the claims to increase.

49. Under the "No APA" Scenario, therefore, Barclays would most likely not have stepped in with DIP financing, repo financing or any other additional liquidity provision during the week of September 15, 2008. Moreover, the absence of a pending sale may well have triggered substantial collateral calls that LBI could not have satisfied. The resulting liquidity squeeze would have made it extremely difficult for LBI to continue business as a broker/dealer, manage and hedge the risks of the assets in its portfolio and undertake trades on behalf of its customers for anything but a short period of time. As stated in Mr. Miller's proffer of Bart McDade's testimony at the September 19th hearing (94:16-20): "Without access to financing, the broker/dealer is incapable of servicing its customer accounts. As a result, the broker/dealer would have no choice but to close its customer accounts and that would result in billions of dollars in losses and damages."

50. But for the Sale Transaction, tens of thousands of LBI customers would not have had immediate access to their accounts. Over 72,000 PIM accounts were transferred under the Trustee's supervision from LBI to Barclays' books. *See* Trustee's First Interim Report, at 18. One of the primary reasons regulators from the Fed and SEC supported the transaction is that it provided for the expedited transfer of customer accounts to a well-capitalized financial institution. Had those accounts been frozen in a SIPC liquidation under the "No APA" Scenario, the processing to allow access to those accounts could have taken months. That could have generated a further wave of panic and uncertainty in an already uncertain period.

51. Since the Fed would have been unwilling and unable to provide a steady stream of liquid funding to LBI over an extended period of time, and since private market sources were unavailable in the absence of the Sale Transaction, the "No APA" Scenario would have eventually ended in a fire-sale, forced liquidation of LBI's assets.

52. Moreover, a liquidation fire sale of LBI's assets would have had a contagious negative impact on global financial markets and financial institutions.

B. "No Approval" Scenario: The Court Does Not Approve the Sale Transaction on September 20th

53. On Thursday, September 18, 2008, Barclays effectively replaced the Fed in providing repo financing to LBI. At the time, LBI apparently faced a shortfall of at least $45 billion in funding its daily operations. Immediately prior to the replacement transaction (i.e., overnight on Wednesday, Sept. 17), the Fed had funded LBI with approximately $46.2 billion in cash and Treasury securities against approximately $50.6 billion in collateral. (See Leventhal Declaration, at ¶ 9.) Certain complications arose in the identification and transfer of the specific assets involved in the Barclays/LBI repo as collateral, and Barclays transferred $45 billion in overnight financing to LBI against pledged collateral. Barclays essentially transferred full market value for LBI's securities, far in excess of what could have been obtained in an immediate fire-sale liquidation of those assets.

54. Under the "No Approval" Scenario, I assume Barclays would have proceeded with its financing of LBI during the week of September 15th in the hope of finalizing the Sale Transaction. I assume also that Barclays would have granted LBI the $450 million DIP credit facility, $10 billion financing on Tuesday, September 16th and $15.8 billion on Wednesday, September 17th. Barclays' willingness to provide LBI with

substantial levels of financing during the week of September 15th, when all other private participants declined, illustrates the value added to LBI's creditors from the Sale Transaction. Without Barclays' funding, there may have been little or nothing left for Barclays to acquire, or to pay LBI's creditors. Thus, the provision of financing by Barclays, under the assumptions of the "No Approval" Scenario, was of immense benefit to LBI's creditors and other stakeholders (including Barclays) in preserving LBI's value.

55. However, it was reasonable at the time to believe (and it is also reasonable to conclude now) that, if the Court had not approved the Sale Transaction on September 20th, then what was avoided on September 15th would most likely have occurred when markets opened on or around Monday September 22nd. Barclays would have undoubtedly pulled back all of its DIP and other financing sources, thereby precipitating a liquidity squeeze that may have prevented LBI from opening for business on Monday morning September 22nd. Indeed, Bryan Marsal, currently CEO of LBHI, agrees that LBI would not have been able to continue doing business on Monday if the Court had not approved the Sale Transaction – see, Marsal's December 22, 2009 deposition (191:13-18):

> Q. Do you know if LBI would have been able to open its door for business on September 22nd if the [Sale Transaction] had not gone through?
>
> A. Would not have been able to. Definitely would not have been able to.

56. The general understanding at the time that the Sale Transaction had to be approved expeditiously in order to preserve value for the estates and for financial markets in general was shared by regulators and government officials. Under the "No Approval" Scenario, the potentially catastrophic effect of the failure of the clearing banks to settle

transactions and the possible freezing of customer accounts would have roiled financial markets and created hardship for liquidity-constrained customers of LBI. The support of the Fed and the SEC for the Sale Transaction stemmed in large part from their recognition of the devastating effect the failure of LBI would have had on its customers. As noted by Harvey Miller in his proffer of Bart McDade's testimony at the September 19th hearing:

> Absent approval of the Barclays' transaction, the broker/dealer business would discontinue as a going concern and adversely impact the credit markets on a global scale in ways that are immeasurable.
>
> [McDade] would testify that Lehman Brothers and its advisors have literally spent every hour attempting to preserve Lehman Holdings' estate and LBI's broker/dealer business.
>
> Other than the liquidity crisis, Lehman has been facing pressure and constraints from regulators and agencies. The Federal Reserve, the SEC, the CFTC and other governmental entities have [been] putting constant pressure on Lehman to engage a prospective buyer and consummate a sale of the broker/dealer business, no later than today [September 19th], so that there is a seamless transition to preserve the business. [93:6-13]

57. Thus, under the "No Approval" Scenario, if the Court had not approved the Sale Transaction, a fire-sale liquidation of LBI would most likely have begun approximately a week later than under the "No APA" Scenario, i.e., on Monday September 22nd as compared to September 15th. Moreover, the "No Approval" Scenario would have entailed an asset fire sale conducted after a week that saw what was effectively the nationalization of AIG, the extension of deposit insurance to money market funds, and the sale of Merrill Lynch to Bank of America, to name just a few of the dramatic events of that turbulent week.[15] An announcement that the Sale Transaction had not been approved would also have coincided with the revelation of problems at

[15] See Appendix 3 for a list of the events of the week of September 15, 2008.

Goldman Sachs and Morgan Stanley that necessitated their expedited move to bank holding company status. As will be discussed in Appendix 4 of this report, the conversion of major investment banks to bank holding company status was necessitated by their dependence on volatile sources of "purchased funds" or "hot money." In contrast, the Sale Transaction provided LBI with access to a stable source of financing in the form of Barclays' substantial deposit base.

58. Moreover, the estates would have been subjected to additional claims under the "No Approval" Scenario liquidation. That is, Barclays would have gone from being a provider of liquidity to a demander of liquidity. As of September 20th, the transfer of collateral under the Barclays repo was still incomplete. If the Court had not approved the Sale Transaction, the estates would have faced considerable claims resulting from the Barclays repo transaction, which would have further depleted resources available to other claimants.

59. Without Barclays' continued financing, the funding necessary to pay employees and consultants in managing the LBHI and LBI estates would have evaporated after September 20th, absent new support from the Fed or the US government. This would have had a deleterious impact on the value of the assets in the estates, particularly since severe operational problems had made it so difficult to sort out what assets were actually available as of the close of business September 19th.

60. Indeed, operational problems at LBI, in the absence of the Sale Transaction, would have resulted in substantial losses to creditors; for example see the October 8, 2008 presentation by Alvarez & Marsal describing $4.8 billion in assets owned by LBHI's Private Equity Group (PEG), (LAZ-A-00004467):

- Lehman holds ~100 co-investments (side-by-side investment directly in portfolio companies of PE clients).
- These investments were not administered or held in a common vehicle, but were spread around the LBI subsidiaries.
- Limited liquidity in most cases and will most often require independent negotiations for each exit. Investment documents and financials are not held centrally and may be difficult to obtain in some cases.

61. Moreover, the market disruption caused by a fire-sale liquidation of LBI would most likely have had a deleterious impact on the LBHI estate, which contained a net derivative asset position of $42 billion (using 8/31/2008 valuations) after the receipt of the proceeds from Barclays.[16]

62. An abrupt cessation of LBI's broker/dealer operations and a rapid collapse of LBI would have resulted in more severe downward pressure on the market values of all but the safest of financial assets. This downward pressure on asset prices, in turn, would likely have had a substantial negative impact on the performance – and possibly even the survival – of remaining broker/dealers as well as clearing banks and clients, the repercussions of which would have spread throughout global financial markets. For example, Fernando et al. (2009) analyze the impact of the LBHI bankruptcy on its clients and find that "[c]ompanies using Lehman as lead underwriter for equity offerings lost 5.33 percent of their market value, on average, in the seven days surrounding Lehman's bankruptcy."[17] This academic study further demonstrates that those firms with stronger long-term relationships with Lehman (in terms of both the quantity of prior transactions

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[16] Alvarez & Marsal Presentation, LAZ-A-00004483.

[17] Fernando, CS, AD May and WL Megginson, "The Value of Investment Banking Relationships: Evidence from the Collapse of Lehman Brothers," October 24,2009 Working Paper.

and the longevity of the interactions) suffered an even greater than average adverse impact on market value.

63. Based on the forgoing analysis, I conclude that, had the Court not approved the Sale Transaction, as assumed under the "No Approval" Scenario, the estates' recoveries would have declined substantially. Moreover, the detrimental impact of the liquidation of LBI would have brought harm to global financial markets, institutions and LBI's clients and customers. Indeed, the SIPA Trustee acknowledged that the Sale Transaction "allowed former LBI account holders to access billions of dollars of assets held in hundreds of thousands of LBI accounts promptly following the largest broker/dealer liquidation filing in history." According to the Trustee, the account transfers to Barclays benefitted approximately 85,000 individual account holders and involved the transfer of customer cash and securities valued at nearly $43.2 billion.[18] These assets would not have been immediately available to the customers if not for the Sale Transaction.

64. In my opinion, under both hypothetical scenarios, the end result would have been a fire-sale liquidation of LBI's assets. The major difference between the two scenarios is the timing of a value-destroying fire sale. Under the "No APA" Scenario, it would most likely have taken place during the week of September 15th, whereas under the "No Approval" Scenario it would most likely have occurred during the week of September 22nd. Either way, the impact of a fire-sale liquidation of LBI would have been detrimental to the estates' recovery values and devastating to LBI customers, financial

[18] Trustee's Second Interim Report for the Period May 30, 2009 through November 11, 2009, page 9.

markets and institutions. In Sections II-D and II-E of this report, I quantify the likely impact of a fire-sale liquidation of LBI using a conservative analytical framework.

C. The Impact of a Fire-Sale Liquidation of LBI

65. In this section of my report, I use information available in September 2008 in order to analyze what could have happened under two hypothetical scenarios but for the Sale Transaction. As noted above, both the "No APA" Scenarios and the "No Approval" Scenario result in a forced fire-sale liquidation of LBI's assets, essentially beginning one week apart. At a minimum, a Lehman fire-sale liquidation would likely have resulted in further widening of credit spreads and CDS spreads, widespread marking-down of assets held by the surviving financial institutions, decreased and possibly insufficient levels of capital adequacy and liquidity among the remaining financial institutions, and heightened volatility and pricing pressure in financial markets throughout the world.

66. Indeed, the detrimental effects of a Chapter 11 filing of LBHI and liquidation of LBI (absent an expedited sale to a well-capitalized financial institution), are discussed in a September 13, 2008 presentation produced by Lazard entitled: "Default Scenario: Liquidation Framework.[19] The presentation lists a "series of events that ...will cascade through the financial markets and impact all financial markets participants from institutions to individual retail investors." (page 1.) The "loss of control of [LBI's] financial position" was expected to trigger a "flight to quality [that] causes massive wealth destruction across institutions and retail investors." Thus, Lehman and/or Lazard anticipated that the abrupt liquidation of LBI following LBHI's bankruptcy would cause

[19] See Lehman Brother "Default scenario: Liquidation Framework' September 13th" (mimeo).

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substantial damage to financial market participants, including Lehman stakeholders and customers.

67. Moreover, comments by industry and government observers regarding the time period surrounding the Lehman bankruptcy suggest additional deterioration in the performance of the US financial system would most probably have been brought on by a fire sale of LBI. This deterioration beyond what was actually experienced could have prompted extraordinary government intervention of a sort not seen since the Great Depression. For example, Warren Buffett recently commented on his fears following LBHI's failure:

> [By Sunday September 14th, 2008], Mr. Buffett was beginning to worry about the entire financial system. In phone conversations, the normally loquacious Mr. Buffett was less talkative and sounded nervous, according to one person who was speaking with him regularly at the time.
>
> Shares of giant investment banks Morgan Stanley and Goldman Sachs were spiraling lower amid worries that they would be the next firms to fail. The commercial-paper market, which helps finance the day-to-day operations of businesses around the country, was seizing up. On September 16, the Reserve Primary Fund, a big money-market fund, revealed huge losses, due in part to holdings of Lehman's commercial paper.
>
> If the commercial-paper market had frozen completely, more major financial institutions and possibly even household names such as GE would have failed, Mr. Buffett says, 'Because their checks would have failed to clear.' That would have triggered panic in the nation's money-market funds, which held about $3.5 trillion in assets, because some of them held commercial paper. The resulting chaos, Mr. Buffett concluded, could have crashed global financial markets, threatening Berkshire.
>
> 'I felt that this is something like I've never seen before, and the American public and Congress don't fully understand the gravity' of the problems, [Buffett] recalls. 'I thought, we are really looking into the abyss.'[20]

[20] Scott Patterson "In Year of Investing Dangerously, Buffett Looked 'Into the Abyss,'" *Wall Street Journal*, December 12, 2009, p. A16.

68. The failure of Lehman's non-US broker/dealer operations (not included in the Sale Transaction) caused wide scale disruptions and confusion throughout financial markets as pending trades were canceled and customer accounts frozen. Given the devastating impact of the failure of Lehman's non-US broker/dealer operations, then the detrimental impact of the failure of its flagship North American operations would have been worse, with substantial negative impacts on both the LBI and LBHI estates, as well as on the global financial system.

69. Furthermore, immediately prior to the formal announcement of the LBHI bankruptcy, equity research analysts at Oppenheimer forecast their assessment of the expected impact on financial markets in the event of a forced liquidation of Lehman assets. The Oppenheimer analysts anticipated a number of negative consequences:

- "After exhaustive efforts, no solution was reached to save Lehman Brothers as no buyers stepped up to bail out the company. As a result, it appears that Lehman Brothers will be forced into the process of liquidation and Lehman's $600 billion asset base will be in the process of being sold. We believe the immediate impact of such will be dramatic credit spread widening and ultimately negative valuation marks for the remaining players."[21]

- "Due to the liquidation of an unprecedented scale, we expect a broad-based decline in marks on asset values within the financial markets. The liquidation of LEH's assets will force the other brokers to mark down their assets accordingly and therefore pressure all capital ratios."[22]

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[21] Meredith Whitney *et al.*, Oppenheimer Equity Research, "Lehman Brothers Holdings Inc.: LEH Likely Forced Into Liquidation" (Sept. 14, 2008), at 1 (hereinafter "Oppenheimer Lehman Company Update (Sept. 14, 2008)").

[22] Oppenheimer Lehman Company Update (Sept. 14, 2008), at 1.

- "We also expect the liquidation by Lehman's counterparties and asset sales to be swift. Accordingly, volatility and pricing pressure will be dramatic."[23]

- "We expect the financial markets to be under unprecedented strain over the next several days as players respond to outsized industry deleveraging."[24]

- "As we expect broad-based pressure upon on asset classes, we expect further write downs across the board, the extent of which is unknown at this time but the severity of which can only be estimated to be meaningful."[25]

70. Similarly, a September 18, 2008 report by Oxford Analytica noted that "[s]hares in the two largest remaining stand-alone Wall Street investment banks, Goldman Sachs and Morgan Stanley, [on September 17th] plunged 14% and 24%." This led the Oxford Analytica analysts to conclude that:

> Lehman's failure constitutes a new chapter in the credit crisis, because it has produced an accelerating de-leveraging spiral. This is characterized by intense asset-price uncertainty and counterparty risk aversion -- producing a fierce credit contraction.

71. As of September 18th, prior to the Court's approval of the Barclays acquisition of LBI, Oxford Analytica considered the forecast for global markets and institutions to be grim:

> **Grim post-Lehman outlook**. There are a number of reasons to fear that the market fallout from Lehman's failure could be very much more serious than the Treasury anticipated:
>
> - Wall Street inter-connectedness. Lehman is a key major player in a variety of key financial markets and is interconnected with other Wall Street

[23] Oppenheimer Lehman Company Update (Sept. 14, 2008), at 1.

[24] Oppenheimer Lehman Company Update (Sept. 14, 2008), at 1.

[25] Oppenheimer Lehman Company Update (Sept. 14, 2008), at 3.

institutions through dozens of different types of counterparty activities.

- Commercial property knock-on. Lehman has very large commercial property holdings, whose liquidation could accelerate the bursting of the commercial property bubble that already appears to be well underway.

- 'De-leveraging' spiral. There is an acute risk that the Lehman failure will accelerate the process of financial market de-leveraging that is already well underway, which would further tighten lending conditions and raise interest rate spreads. By so doing, it would exacerbate the vicious cycled in which the US presently finds itself mired. Accelerated de-leveraging would aggravate the housing market bust and further dampen economic growth. This, in turn, would lead to yet a further weakening in the financial system by increasing bank losses.

'De-leveraging' economic impact. Lehman's collapse may already be accelerating financial market de-leveraging in at least two critical ways:

- Spiraling markdowns. It is depressing commercial property market prices and asset-backed securities' prices as Lehman's loan portfolio is unwound. This will force other banks and financial institutions to have to mark down further their loan portfolios. That in turn could force those banks to have to sell assets to raise new capital, which would further intensify the credit crisis.

- Further failures?. It also provided a very clear signal to the markets that the Treasury and Fed are prepared to allow large financial institutions to fail. This is likely to intensify market pressure on institutions like Washington Mutual and Wachovia, which are known to have troubled balance sheets.

In short, the Lehman failure greatly increases the chances of a major economic recession -- one with potentially global implications.

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72. The Barclays acquisition of LBI was a positive event that limited some of the fallout from the LBHI bankruptcy filing noted by contemporaneous analysts and institutional investors. If the Sale Transaction had not occurred, the devastating impact of a fire sale of LBI's assets would have further harmed financial markets, LBI customers and LBI employees, as well as threatened the solvency of global financial institutions in general.

73. Professor Darrell Duffie of Stanford University has shown how trading losses at broker/dealer firms, such as LBI, can start a cascading process that results in a costly fire-sale liquidation to raise liquid funds.[26] As prime brokerage customers (e.g., hedge funds), derivatives counterparties and other dealer banks detect signs of capital depletion at the broker/dealer, they rationally demand additional collateral and enter into "novations" in order to reduce their exposure.[27] Since broker/dealers such as LBI typically finance their operations, in large part, using the cash securities held in customers' accounts, these actions directly deprive the firm of needed liquidity, generating a liquidity crisis. "When the solvency of a dealer bank becomes uncertain, its various counterparties and customers have incentives to reduce their exposures to the bank, sometimes quickly and in a self-reinforcing cascade." (Duffie (2009) page 7). If this downward spiral is not arrested by either a sale or a government bailout, clearing banks will refuse to permit daylight overdrafts or clear trades, directly resulting in destruction of the broker/dealer's franchise value and "a large fire sale, disrupting markets for assets and over-the-counter derivatives, with potentially destructive

[26] Duffie, D., "The Failure Mechanics of Dealer Banks," Stanford University Working Paper, June 22, 2009.

[27] Novations substitute one party for another in a contract.

macroeconomic consequences." (Duffie (2009), page 8). A fire sale of LBI's assets, and the resulting "destructive macroeconomic consequences," were avoided as a result of the Sale Transaction.

D. Analysis of the Impact of a Fire-Sale Liquidation of LBI on Proceeds Available to the Estates and to Lehman's Creditors

74. It is my opinion that creditors of LBHI and LBI were benefited by the Court's approval of the Sale Transaction. For example, the Barclays acquisition did not encompass certain valuable assets (e.g., Neuberger Berman, Eagle Energy) and enabled the estates to realize recovery value from an orderly sale of those assets, rather than a fire-sale liquidation.[28] For example, the LBHI estate was able to recoup $800 million in preferred stock from the employee buyout of Neuberger Berman money management firm.[29] If the Sale Transaction had not been consummated, the damage to financial markets could well have undermined the ability of Neuberger Berman to operate, impacting the firm's $158 billion in assets under management.

75. Moreover, creditors who would have had claims created by the cancellation of open trades upon LBI's liquidation were much better off having Barclays assume certain positions and accounts given the reluctance of clearing banks and others to trade with LBI after the failure of LBHI.

76. Further, tens of thousands of customers benefited by having immediate access to their accounts at a well-capitalized financial institution. If the Sale Transaction

[28] For example, see the presentation by Alvarez & Marsal (page LAZ-A00004455) showing that a liquidation rather than a sale of Eagle Energy would have resulted in a reduction in the proceeds to the estate ranging from $8 to $79 million.

[29] Moreover, LBHI's estate retained a 49 percent equity stake. Kerber, R., "Neuberger Berman Finishes Employee Buyout," *Reuters*, http://uk.reuters.com/article/ idUKTRE5434YL20090504

had not been consummated, all transactions passing through the LBI accounts could have failed, generating massive losses, confusion, and panic as customers would have been unable to immediately access their accounts. Indeed, as of Wednesday, September 17, the "Chicago Mercantile Exchange unilaterally decided to close out all of Lehman's positions on that exchange. That closeout resulted in a loss to Lehman of approximately 1.6 billion dollars." (September 19th Hearing, 61:14-23). There is substantial evidence that, had Barclays not stepped into LBI's shoes at other clearing houses, such as the Options Clearing Corporation, those exchanges would have taken similar actions. McDade September 2, 2009 Deposition at 275:3-13; Kobak December 7, 2009 deposition at 276:15-277:15 and 288:22-289:6; OCC Rules 1104 (707, 1007). Moreover, an email dated September 21st communicated the OCC's position that: "If the [Barclays] transaction does not close tonight, the OCC would need to immediately liquidate and close out the LBI accounts and is preparing to do so." (BCI-CG00064703). That is, but for the Sale Transaction, additional claims would have competed for access to a pool of resources already depleted by losses from a fire-sale liquidation.

77. At the September 19 approval hearing, Harvey Miller, in proffering the testimony of Bart McDade, informed the Court that Lehman was concerned that, absent approval of the sale, there would be potentially hundreds of billions of losses:

> "Not only is this sale a good match economically but it saves the jobs of thousands of employees and avoids losses that could total in the hundreds of billions of dollars." (McDade proffer) [Sept. 19 Hearing Tr. at 98:10-12]
>
> "If the transaction does not close today or over this weekend, Your Honor, Mr. McDade would testify that the effect on the broker-dealers business and on Lehman Holdings would be devastating (...) He would testify that the liabilities in the hundreds of billions of dollars would be triggered against Lehman Holdings which would in turn deplete the property available to distribution to creditors." [Sept. 19 Hearing Tr. at 102:3-18.]

I understand this was likely a general estimate of the potentially catastrophic impact of having the DTC and its clearing corporations cease to act for Lehman. If that had happened, all transactions passing through the Lehman accounts would have failed, generating massive losses, confusion, and panic. Similarly, the inability of customers to access their accounts would have generated massive panic and sell-offs, causing further losses. The extent of these losses is impossible to calculate with any precision, but they would have been vast. I therefore believe Mr. Miller's statement was a reasonable way to convey to the Court the extent of the massive downside of not approving the sale. In light of this potentially massive downside, it should not be controversial that the sale to Barclays was obviously preferable to liquidation from everyone's perspective. Nevertheless, to further confirm that point, I use publicly available data and certain other information produced in discovery in this matter, to determine a conservative estimate of the loss in proceeds available to Lehman's claimants resulting from a fire sale of LBI's assets.

78. To estimate the loss that may have occurred in a forced liquidation of LBI's financial assets alone (apart from the other massive losses that could have been incurred absent the Sale Transaction), I utilize the Federal Reserve Collateral Margins effective throughout 2008 (i.e., the Fed "haircuts") as benchmark measures of fire-sale asset liquidation values. The Fed's Collateral Margins proxy for the proceeds that could have been obtained immediately upon each instrument's transfer.[30] Since the Fed collateral margins involve securities transferred as collateral for a short term loan, the

[30] This is confirmed in the September 10, 2009 deposition of Stephen King (page 112-113): "But when the Fed lends, if you look at the Fed website ... we will advance less than [the market valuation of a security] as the loan."

discount required would be much less than the discount required for an outright fire sale of the securities, thereby providing a highly conservative estimate of the impact of fire-sale liquidation on asset values.

79. Consequently, I apply the Fed collateral discount margins to each category of financial assets received by Barclays from LBI in the acquisition in order to estimate the proceeds that could possibly have been obtained from an immediate liquidation of these assets in the financial markets.[31]

80. Exhibit 1 provides a conservative estimate of how the Lehman bankruptcy estates would have been harmed by the fire sale of LBI's assets. The valuations and asset classifications shown in Exhibit 1 are those that were used in the Acquisition Balance Sheet, based on the Barclays valuations of bid prices and verified by PriceWaterhouse auditors.[32] (BCI-EX-115843 – BCI-EX-115846) Exhibit 1 shows that the liquidation value of $42.2 billion of LBI assets could possibly, under my conservative assumptions, raise $36 billion under the Fed discount margin schedule.

81. If LBI did not liquidate its holdings of securities in a fire sale disposition, then it would have been required to hold and manage those assets in a falling market with uncertainty concerning its ability to hire and retain an adequate staff of experienced traders to do so. For example, LBI would also have had to take steps to avoid substantial losses on the exchange traded derivatives business that Barclays assumed. LBI faced an

[31] I do not include the exchange traded derivatives (e.g., OCC and PIM customer balances) in my analysis because at the time of the Sale Transaction: (1) it was unclear what they comprised, and (2) Barclays assumed both the assets and liabilities, and it was unclear whether there would be any net asset value at all or whether the exchanges would have seized all of the assets to satisfy their claims. Thus, if the Sale Transaction had not been consummated, it is unclear whether there would have been any exchange traded derivatives assets to liquidate.

[32] I also performed the analysis using notional values and BONY valuations and found even larger losses if Lehman had sold the financial assets at fire sale prices.

immediate risk that the exchanges on which those derivatives were traded would close out LBI's positions and seize all associated collateral as done by the Chicago Mercantile Exchange on Wednesday September 17th. As noted in the January 7, 2010 deposition of Harvey Miller (18:1-11):

> I think I used the word 'values' -- were changing all the time because of the market. I knew that we were having – not we, Lehman was having substantial problems with the Chicago Mercantile Exchange. People were closing out Lehman positions. It was a very volatile period, as I said before, tumultuous.

82. Further, the real estate that Lehman was able to sell to Barclays at its appraised value would have been worth much less absent the Sale Transaction. The appraisals assumed that the buildings would remain fully occupied and used for an ongoing broker/dealer and investment banking business. Had the buildings not been occupied, their value would have been substantially diminished, particularly given uncertainty in the New York commercial real estate market at that time. September 19th Hearing (138:23-139:12, 243:1-9.)

83. The analysis presented in Exhibit 1 conservatively estimates that Lehman's stakeholders would have lost more than $6 billion if the financial assets had been sold at fire sale prices instead of being acquired by Barclays.[33]

84. This estimate of a $6 billion loss due to a hypothetical forced sale of LBI assets in the absence of the Sale Transaction is conservatively low. The guidance provided by the Fed collateral margins anticipates lendable values in "ordinary" conditions "for institutions in sound financial condition."[34] Circumstances around the

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[33] To obtain the values in Exhibit 1, I utilized the highest margins for each category of asset classes. If I had used the lower margins specified in the schedule, Lehman's losses would have increased to more than $8 billion.

[34] Federal Reserve, http://www.frbdiscountwindow.org/cfaq.cfm?hdrID=21&dtlID=90#a6.

time of the LBHI bankruptcy were anything but ordinary, and LBI's condition was certainly not sound. Heightened volatility, frozen or otherwise diminished trading, pervasive financial difficulties across most institutions that would ordinarily be expected to participate as buyers to such an asset sale, as well as LBI's liquidity crunch, would all contribute to lower liquidation values. It is reasonable to assume that actual liquidation discounts would have been much greater than those implied by the Fed collateral margins.

85. Moreover, many of the individual securities in the Barclays repo collateral would not even have been eligible as Fed collateral because of either their asset class ineligibility (e.g., equities and unencumbered clearing box assets) or their poor credit quality, and therefore my analysis using the Fed margins overstates the fire-sale liquidation value of the LBI collateral and understates the losses to the estates.[35]

86. At a minimum, therefore, Barclays' involvement in the repo financing and acquisition of LBI assets benefitted LBI's stakeholders by avoiding a fire sale loss of at least $6 billion, measured in an extremely conservative manner.

E. Analysis of the Impact of a Fire-Sale Liquidation of LBI on Other Financial Institutions

87. In this section, I examine the impact a fire-sale liquidation of LBI would likely have had on other major broker/dealer financial institutions (specifically, Merrill Lynch, Goldman Sachs, Morgan Stanley, and UBS Securities).

[35] For example, in the case of equities (an asset class typically ineligible as Fed collateral), I use the 85 percent SEC margin applied to exchange traded equities for capital computation purposes; see E. Sirri ("Speech by SEC Staff: Remarks at the National Economists Club: Securities Markets and Regulatory Reform," April 9, 2009). Moreover, I utilize a 90 percent margin for the 15c3 accounts because they contained government securities. However, since unencumbered assets could not be identified, I utilized no margin at all, an assumption that without question substantially overstates their liquidation value.

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88. To a greater or lesser degree, each of these institutions was itself facing substantial pressures as a result of the prevailing financial crisis. (See discussion in Appendix 4 of this report.) Accounting rules required these firms to mark their assets to market, which entailed a substantial write-down of asset values throughout the period at issue. Declining asset values would have depleted the banks' capital levels, making them increasingly prone to insolvency. If the already dire market conditions were exacerbated by a fire sale of LBI assets, the result could very well have been a domino effect of cascading failures among these other firms.

89. Using publicly available data and certain other information produced in discovery in this matter, I estimate the likely impact on the capital positions of LBHI and the four other firms listed above as a result of a fire sale of Lehman assets.

90. I begin by collecting data regarding the firms' net exposures to various categories of assets. As with the Barclays collateral sale analysis discussed in Section II.D above, I utilize the Federal Reserve Collateral Margin schedule to assign distressed asset sale discounts to certain of the asset categories for which I collected data. These discounts are conservative measures that reflect the systemic, downward pressure on asset valuations likely to result from a fire-sale liquidation of Lehman assets. Since certain asset categories are not eligible as Fed collateral (e.g., real estate and financial guarantees), I do not apply any margin reduction to these asset categories. This is a conservative approach on my part, as it almost certainly underestimates losses from the hypothetical Lehman fire sale. The particular categories of excluded assets are illiquid, and thus likely to sell at large discounts from market value, if at all. Adjusting asset values in this way, I then estimate the consequent impact on each firm's shareholders

equity, common stockholders' equity and tangible common equity from the hypothetical fire sale event.[36]

91. Exhibit 2 shows the results of my analysis. Declining asset values from Lehman's liquidation fire sale would have directly depleted these major banks' capital levels, making them more prone to insolvency. Not surprisingly, LBHI is most strongly impacted by the declining asset values. For example, Exhibit 2 shows that both LBHI's common stockholders equity and tangible common equity would be completely depleted. Moreover, my conservative analysis (presented in Exhibit 1) demonstrates that LBI's capital would have been depleted due to losses from a fire-sale liquidation of LBI's assets, thereby rendering LBI insolvent from both a regulatory and economic standpoint.

92. Estimating various ratios of equity to assets for Merrill Lynch, Goldman Sachs, Morgan Stanley, and UBS Securities shows that each would have borne a substantial decline in capital ratios. Conservatively measured, the ratio of tangible common equity to total assets for each of these institutions would have been in the range of -0.04 percent to 1.65 percent if LBI had been liquidated under a fire sale. The ratio of shareholders (common stockholders) equity to total assets for each would have been in the range of 0.48 percent to 7.93 percent (0.36 percent to 6.62 percent). By contrast, SEC capital regulations for broker/dealers require net capital of 6.67 percent of total indebtedness.[37]

[36] According to GAAP, shareholders equity is common stock plus minority interest plus preferred equity. Common equity is share capital plus additional paid in capital plus retained earnings. Tangible common equity is common equity minus intangible assets (which includes goodwill).

[37] Broker/dealers are required to measure net capital as follows: GAAP net worth minus qualifying subordinated loans minus illiquid assets (e.g., goodwill, fixed assets) minus securities haircuts.

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F. The Possibility of More Aggressive Federal Intervention

93. In the previous section, I discussed the losses to the estates, as well as to other financial institutions that would likely have occurred if LBI had liquidated its assets in a fire sale. If the Sale Transaction had not occurred, a bright spot in the turbulent week of September 15th would have been absent, adding fuel to the panic that engulfed the entire financial system. Panics are emotional, sometimes irrational market reactions to bad news and uncertainty. As Governor Ben Bernanke states:[38]

> Following the Lehman collapse, panic gripped the money market mutual funds and the commercial paper market, as I have discussed. More generally, during the crisis runs of uninsured creditors have created severe funding problems for a number of financial firms. In some cases, runs by creditors were augmented by other types of 'runs'--for example, by prime brokerage customers of investment banks concerned about the funds they held in margin accounts. Overall, the role played by panic helps to explain the remarkably sharp and sudden intensification of the financial crisis last fall, its rapid global spread, and the fact that the abrupt deterioration in financial conditions was largely unforecasted by standard market indicators.

94. Under these panic conditions during this tumultuous time period, a more extreme scenario that possibly could have occurred, had the Sale Transaction not been consummated, would have been a "bank" holiday such as that experienced in the US during the 1930s Great Depression.

95. On March 5th 1933, a bank holiday was declared by President Roosevelt following a month long run by depositors. Since the banks were closed, depositors were prevented from withdrawing their money, thereby limiting further deterioration in the banking system, but causing widespread distress for liquidity-constrained depositors, consumers and businesses.

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[38] Ben Bernanke, "Reflections on a Year of Crisis," September 15, 2009 Speech, http://www.federalreserve.gov/newsevents/speech/bernanke20090821a.htm

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96. The 2008 global liquidity crisis, while generated by institutional investors and wholesale lenders avoiding credit exposure, may possibly have required a similar extreme measure absent the Sale Transaction. Indeed, during the weeks leading up to the September 22nd Barclays acquisition, interbank market activity had virtually ceased and sophisticated lenders, such as financial firms and hedge funds, refused to provide liquidity to the market, effectively resulting in a wholesale "run" on the financial system. Moreover, the failure of the Prime Reserve money market mutual fund on September 17, 2008 initiated a run by large investors in money market mutual funds in general, prompting the US government to extend deposit insurance guarantees to money market mutual funds in order to prevent further liquidity drains.

97. Whether a run is induced by purchased fund providers or retail depositors, the underlying cause is the same -- a lack of confidence in the banking system. The cost of deterring such runs can be substantial. According to Professor Silber, the 1933 bank holiday restored the integrity of the financial system because the government extended explicit deposit insurance guarantees to all deposits.[39] In contrast, during October of 2008, the US government increased the deposit insurance guarantee to a $250,000 limit, but did not explicitly provide unlimited explicit guarantees of all deposits. In order to replicate the level of guarantees provided during the 1933 bank holiday for a hypothetical bank holiday occurring in 2008, all bank deposits and possibly all purchased fund transactions would have had to be fully guaranteed by the US government. As of the end

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[39] See W. Silber "Why did FDR's Bank Holiday Succeed?" Federal Reserve Bank of New York, Economic Policy Review.

of 2006, the total amount of assets in money markets funds exceeded $6 trillion.[40] In addition, US bank deposits exceeded $7 trillion and their purchased funds $2 trillion. Without even considering financial institutions' corporate bond issues, this would amount to a dramatic increase in the US government's contingent obligations, possibly far in excess of the $700 billion in funds allocated under TARP passed on October 3, 2008, after the Barclays acquisition took place.

98. An alternative scenario that may have occurred if the Barclays transaction had not occurred was more extensive government control of financial institutions. This is not entirely a hypothetical scenario since AIG has been de facto nationalized with 80 percent US government ownership as of September 17, 2008. In addition, government infusions of TARP funds resulted, at one point, in a 36 percent ownership stake in Citigroup. These ownership positions give the US government a say in the operation of major financial institutions that is akin, in extreme cases, to nationalization.[41] Moreover, government control of banks is not only a costly public program, but government-owned banks have been found to perform less efficiently than privately controlled banks in a number of countries.[42, 43]

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[40] All figures are obtained from the Bank of England, *Financial Stability Report,* October 2007, Issue 22, page 20.

[41] Moreover, the TARP capital injections into other major banks have led managements of those banks to complain about overbearing government interference in areas such as compensation, and led management to focus on repaying its government obligations as soon as possible.

[42] For example, see R. DeYoung and D. Nolle, "Foreign-Owned Banks in the US: Earning Market Share or Buying It?" *Journal of Money Credit and Banking*, 28 (November 1996), and Mahajan, A., N. Rangan and A. Zardkoohi, "Cost Structures in Multinational and Domestic Banking," *Journal of Banking and Finance,* 20 (1996), pp. 238-306.

[43] An alternative scenario would have been to selectively close organized financial markets for a period of time. Market closures are not unknown. Indeed, the NYSE has been closed on a number of occasions, most recently following 9/11.

G. It Was Reasonable To Believe In September 2008 That the Lehman Estates and their Creditors Would Have Been Worse Off But For the Sale Transaction

99. In summary, for the reasons discussed above, it is my opinion that Lehman creditors would likely have been substantially worse off had Barclays not entered the original APA and stepped in to provide interim financing to LBI during the week of September 15th ("No APA" Scenario), or if the Court had not approved the final Purchase Agreement on September 20th ("No Approval" Scenario).

100. As discussed above, it was reasonable to anticipate (and also reasonable to conclude now) that, if the Sale Transaction had not been consummated, an LBI liquidation and consequent fire sale would likely have occurred, with substantial adverse effects on asset values, required risk premiums and market liquidity, as well as detrimental impacts on other major financial institutions. Moreover, drastic action by federal regulators to freeze trading or temporarily close institutions in response to contagious failures following LBI's forced liquidation would likely have added further uncertainty to an already unprecedented situation, and likely have caused extreme distress to liquidity-constrained consumers and business, with detrimental impacts on the economy in general.

III. Conclusion

101. Extraordinarily difficult and uncertain economic conditions surrounded the negotiation of the Sale Transaction and its approval by the Court. In this environment, Barclays undertook a risky and uncertain investment in LBI, a rapidly deteriorating company which faced severe liquidity and solvency problems, with the hope and expectation that the transaction would greatly benefit Barclays. No other financial

(or non-financial) firm stepped forward to rescue LBI from an impending fire-sale liquidation that would have certainly destroyed value and harmed the estates. My analysis demonstrates that it was reasonable to believe in September 2008 (and it is still reasonable to conclude now) that the LBHI and LBI estates would have been substantially worse off if Barclays had not undertaken the Sale Transaction and/or if the Court had not expeditiously approved it on September 20, 2008.

102. It is my opinion that it was reasonable to believe in September 2008 (and it is still reasonable to conclude now) that financial markets and institutions, LBI customers, LBI employees, and indeed the entire financial system would have been harmed if Barclays had not undertaken the Sale Transaction and/or if the Court had not expeditiously approved it on September 20, 2008. The Sale Transaction was one of the few economic bright spots during a period of extreme financial market turbulence and panic that frightened even experienced investors such as Warren Buffett. It was reasonable to anticipate at the time (and it is still reasonable to conclude now) that, absent the Sale Transaction, the financial crisis could have been more severe, with further deterioration in the value of many financial institutions, resulting in an even deeper economic downturn than the one actually experienced.

Respectfully submitted,

Anthony Saunders

Professor Anthony Saunders

January 8, 2010.

Exhibit 1
Fire-Sale Valuations of LBI Financial Assets Acquired by Barclays

	Barclays Acquisition Balance Sheet Values	Fed Margin	Discounted Fire Sale Valuations
Agency Mortgages	12,619,993,309	0.8	10,095,994,647
Corporates	1,398,935,117	0.8	1,119,148,094
Emerging Markets	261,391,999	0.8	209,113,599
Equities	9,343,263,702	0.85	7,941,774,147
Treasuries/Agencies/Munis	14,991,498,861	0.9	13,492,348,975
PMTG	1,431,379,253	0.85	1,216,672,365
PMTG II	643,840,635	0.85	547,264,540
15c3 Assets	769,000,000	0.9	692,100,000
Unencumbered Assets	707,000,000	1	707,000,000
Total	$42,166,302,876		$36,021,416,366
Loss in Value to Lehman as a Result of Hypothetical Fire Sale			-$6,144,886,509.60
% Loss in Value			-14.57%

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Exhibit 2
Impact of Fire-Sale Liquidations on Major Financial Institutions

Net Assets Prior to LBI Fire Sale	GS	Lehman	MS	MER	BAC
Commercial paper, CD, TD, other money market instruments	17,405	4,745	0	0	0
US govt., federal agency and sovereign obligations	37,421	-36,743	37,005	6,478	57,649
Mortgage and other ABS loans and securities	29,286	72,110	0	19,130	10,577
Bank loans and bridge loans	27,033	0	0	0	0
Corporate debt securities	25,797	41,655	107,492	37,421	41,894
Equities and convertible debenturs	57,898	4,365	39,131	15,009	-3,490
Physical commodities & real estate	1,180	20,664	3,524	-830	0
Derivative contracts	17,659	21,106	19,179	18,493	19,326
Total Shareholders Equity	49,220	28,443	35,765	38,355	161,039
Total Common Equity	42,499	19,450	34,665	29,750	136,888
Tangible Common Equity	37,266	15,365	30,669	24,761	45,965
Total Assets	1,081,773	639,432	987,403	841,478	1,831,177
Capital Ratios (Percent of Total Assets):					
Total Shareholders Equity/Assets	4.55%	4.45%	3.62%	4.56%	8.79%
Total Common Equity/Assets	3.93%	3.04%	3.51%	3.54%	7.48%
Tangible Common Equity/Assets	3.44%	2.40%	3.11%	2.94%	2.51%

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Exhibit 2 (Continued)

		LOSSES DUE TO DISCOUNT IN FIRE SALE				
Net Assets	**Fed Margin**	**GS**	**Lehman**	**MS**	**MER**	**BAC**
Commercial paper, CD, TD, other money market instruments	0.95	870	237	0	0	0
US govt., federal agency and sovereign obligations	0.90	3,742	-3,674	3,701	648	5,765
Mortgage and other ABS loans and securities	0.80	5,857	14,422	0	3,826	2,115
Bank loans and bridge loans	0.70	8,110	0	0	0	0
Corporate debt securities	0.80	5,159	8,331	21,498	7,484	8,379
Equities and convertible debenturs	0.85	8,685	655	5,870	2,251	-524
Physical commodities & real estate	1.00	0	0	0	0	0
Derivative contracts	1.00	0	0	0	0	0
Total Losses		32,424	19,971	31,069	14,209	15,736
But-for Shareholders' Equity		16,796	8,472	4,696	24,146	145,303
But-for Common Stockholders Equity		10,075	-521	3,596	15,541	121,152
But-for Tang. Common Equity		4,842	-4,606	-400	10,552	30,229
But-for Capital Ratios (% Assets):						
But-for Shareholders' Equity		1.55%	1.32%	0.48%	2.87%	7.93%
But-for Common Stockholders Equity		0.93%	-0.08%	0.36%	1.85%	6.62%
But-for Tang. Common Equity		0.45%	-0.72%	-0.04%	1.25%	1.65%

Notes: Shareholders Equity is common stock + minority interest + preferred equity.
Common Equity is share capital + additional paid in capital + retained earnings
Tangible Common Equity is Common Equity - intangible assets (which includes goodwill)

Appendix 1

PROFESSOR ANTHONY SAUNDERS

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Primary Areas of Interest

Financial institutions, international finance/banking and financial economics.

Education

London School of Economics, 1968-71, BS, 1971, Monetary Economics
London School of Economics, 1971-72, MS, 1972, Money and Finance
London School of Economics, 1976-81, Ph.D., 1981, Thesis title:
"The Behavior and Performance of the London Clearing Banks, 1965-1977"

Current Position

Stern School of Business, New York University
John M. Schiff, Professor of Finance

Previous Positions

Chairman of the Department of Finance (1995-96 and 97-2007)
Stern School of Business, New York University
Assistant Professor of Finance (1978-1982)
Associate Professor of Finance (1982-1987)
Professor of Finance (1987-)
Professor of International Business and Finance (1988 -)
Director of Undergraduate Studies in Finance (1983-1985)
Acting Director of the Salomon Brothers Center for the Study of Financial Institutions (September 1984-85)

Associate Director of the Salomon Brothers Center for the Study of Financial Institutions (1985-)

Courses taught: Money and Banking: BS
Risk Management in Financial Institutions: MBA
Seminar in Banking: Ph.D.
Introduction to Finance: MBA
Credit Risk: EMBA
NYU Executive Programs on Risk Management

Current Advisory Positions

President Elect – Financial Management Association (2009)
Nobel Prize in Economics, Nomination Committee (2000-)
Investment Advisory Board, Zurich Financial Services (2003-)
Research Advisor, FDIC – Center for Financial Research (2004-)

Visiting Positions – Non-Academic

Comptroller of Currency
IMF
Federal Reserve Board of Governors
Federal Reserve Bank of Philadelphia
Federal Reserve Bank of New York

Visiting Positions - Academic

Stockholm School of Economics
INSEAD
City University (London)
University of Melbourne
ISEAS (Singapore)
University of Bocconi,
University of Otago
HKUST (Hong Kong)
University of St. Andres
ALBA (Greece)
London School of Economics

Consulting Experience (selected)

2009	Boise, Schiller and Flexner	Lehman vs. Barclays (expert witness)
2009	Labaton	Countrywide and Securitization (expert witness)
2009	Black and Fire, etal	New Mexico Pension Fund vs. Countrywide

		(expert witness)
2009	Bass, Berry and Sims and Sullivan and Cromwell	Regions Bank and the Performance of Morgan Keegan Bond Funds during the Current Credit Crisis
2008	Donovan and Associates	Merger premium paid for Sovereign Bank by Santandar during the Crisis.
2008	Czech Republic	International Arbitration on Foreign Bank Acquisition of Domestic (Czech) bank
2008	Canada Customs and Revenue Agency	GE Capital Canada payment of debt guarantee fees to GEC (expert witness)
2008	Bass, Berry and Sims (Nashville)	Defendant, Morgan Keegan Group of Funds (expert witness)
2008	Morrison and Foerster	Olympus Capital vs. Loan Star, international arbitration over purchase of shares in a credit card company (expert witness)
2007	Boies, Schiller & Flexner, etal	Genesco vs. Finish Line (UBS), Credit Market conditions and loan commitments (expert witness)
2007	Andrews Kurth	Mirant (MCAR) Bankruptcy Trustees vs. Southern Company (expert witness)
2007	Bernstein, Liebhard	UGCOM vs. LMI Minority share purchase (expert witness)
2007	Mark Kirshner/Refco (Bankruptcy Trustee)/ Milbank, Tweed et al	Thomas Lee, et al and others (consultant)
2007	Parker Freedland et al	Iridium, Fraud on the Market (expert witness)
2007	Hogan and Hartson	CSFB vs. Calyon Bank Loans and Securitization (consultant)
2006	Black and Fine	Sumitumo, Copper Prices and Banks (expert witness)

2006	Crotchett, Pitre, Simon and McCarthy	Silvercreek vs. Salomon Smith Barney et al (expert witness)
2006	Greer, Herz and Adams	Structured Finance Products, Texas Pension Funds, Enron and Banks (expert witness)
2006	Milberg Weiss	PMA (class action) expert witness
2006	Grant and Eisenhofer	Structured Finance Products, Ohio Pension Funds, Enron and Banks (expert witness)
2006	Pepe and Hazard	Structured Finance Products, CRRA, Enron and Banks (expert witness)
2006	Pepe and Hazard	Enron's Creditworthiness (expert witness)
2006-	Government of New Zealand (IRD)	Structured Finance Products, Westpac, Deutsche Bank and BNZ (expert witness) multiple cases
2005	Debevoise Plimpton	Valuation of Life Insurance Contracts (consultant)
2005	Pepe and Hazard	ENRON and the rating agencies (consultant)
2005-2006	King and Spalding	Reports on Restructuring of HYNIX (expert reports)
2005-	Department of Justice	Goodwill and FIRREA, Carteret Savings Bank and Ambase (expert witness)
2005	Milberg Weiss	Asia Pulp and Paper (class action) expert witness
2004	Department of Justice	ENRON: Bayley et al, Nigerian Barges - criminal case (expert witness)
2003 - 2004	Department of Justice	Goodwill and FIRREA, Perpetual Savings Bank (expert witness)
2004	Milberg Weiss	Nortel (class action) expert witness
2003	Hale and Dorr	Hynix dumping of DRAMS (expert report)
2001-2006	Department of Justice	Losses Related to the Goodwill Provisions of the Financial Institutions, Reform and Recovery Act (expert witness), 5th-3rd D and N Banks

Research

Ranked No 1 as the "Most Prolific Author" in 16 core Finance Journals over 50 years.....see, P.L. Cooley and J.L. Heck "Prolific Authors in the Finance Literature: A Half Century of Contributions" *Journal of Finance Literature*, Vol 1, Winter 2005, pp 46-69 and the most prolific author in the Finance Literatures top seven journals for 1959-2008 in Jean L. Heck and Philip L. Cooley "Most prolific Authors in the Finance Literature: 1959-2008, (http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1355675).

Publications (selected)

(i) Journals

"Lending Relationships and Loan Contract Terms" (with S. Bharath, S. Dahiya and A. Srinivasan), *Review of Financial Studies* (forthcoming).

"Bank Debt versus Bond Debt: Evidence from Secondary Market Prices" (with E. Altman and A. Gande), *Journal of Money Credit and Banking* (forthcoming).

"The Cost of Being Late: The Case of Credit Card Penalty Fees," *Journal of Financial Stability* (Forthcoming).

"Bank Debt and Corporate Governance" (with V. Ivashina, etal), *Review of Financial Studies,* 2009.

"The Long Run Behavior of Underwriting Spreads (with D. Palia and D. Kim), *Journal of Financial and Quantitative Analysis,* 2009.

"The Economics of Credit Cards, Debt Cards and ATMs: A Survey and Some New Evidence" (with N. Massoud and B. Scholnick), *Journal of Banking and Finance*, 2008.

"So What Do I Get? The Bank's View of Lending Relationships" (with S. Bharath, S. Dahiya and A. Srinivasan), *Journal of Financial Economics*, 2007.

"The Impact of Institutional Ownership on Corporate Operating Performance" (with A. Marcus, M. Cornett and H. Tehranian), *Journal of Banking and Finance*, 2007.

"The Use of ATMs in Bank Strategy: Is There a Customer Relationship Effect?" (with N. Massoud and B. Scholnick), *Journal of Business,* 2006.

"Should Banks Be Diversified? Evidence from Individual Bank Loan Portfolios" (with V. Acharya and I. Hasan), *Journal of Business*, 2006.

"Bank Borrowers and Loan Sales: New Evidence on the Uniqueness of Bank Loans" (with S. Dahiya and M. Puri), *Journal of Business*, 2004.

"Commercial Bank Underwriting of Credit - Enhanced Bonds: Are There Benefits to the Issuer" (with R. Stover), Journal of International Money and Finance, 2004.

"Incorporating Systematic Influences into Risk Measurement: A Survey of the Literature" (with L. Allen), *Journal of Financial Services Research*, 2004.

"The Role of Financial Advisors in Mergers and Acquisitions" (with L. Allen and J. Jagtiani and S. Peristiani), *Journal of Money, Credit and Banking*, 2004.

"Financial Distress and Bank Lending Relationships" (with S. Dahiya and A. Srinivasan), *Journal of Finance*, 2003.

"Issues in the Credit Risk Modeling of Retail Markets" (with L. Allen and G. Delong), *Journal of Banking and Finance,* 2003.

"The Effects of Cross-Border Bank Mergers on Bank Risk and Value" (with Y. Amihud and G. DeLong), *Journal of International Money and Finance*, 2003.

"Are Emerging-Market Equities a Separate Asset Class?" (with I. Walter), Journal *of Portfolio Management*, Spring 2002

"Credit Ratings and the BIS Capital Adequacy Reform Agenda" (with E. Altman), *Journal of Banking and Finance*, May 2002.

"Price Formation in the OTC Corporate Bond Markets: A Field Study of the Inter-Dealer Market" (with A. Srinivasan and I. Walter), *Journal of Economics and Business*, January/February 2002.

"An Analysis of Bank Charter Value and Its Risk Constraining Incentives," *Journal of Financial Services Research*, 2001.

"An Analysis and Critique of the BIS Proposal on Capital Adequacy and Ratings," *Journal of Banking and Finance,* 2001.

"The Determinants of Bank Interest Margins: An International Study" (with L. Schumacher), *Journal of International Money and Finance*, 2000.

"Low Inflation: The Behavior of Financial Markets and Institutions," *Journal of Money, Credit and Banking,* 2000.

"Financial Fragility and Mexico 1994 Peso Crisis: An Event Window Analysis of Market Valuation Effects" (with B.Wilson and G. Caprio), *Journal of Money, Credit and Banking*, 2000.

"A Theory of Bank Regulation and Management Compensation" (with K. John and L. Senbet), *Review of Financial Studies*, 2000.

"Mexico's 'Tequila' Bank Crisis: Devaluation or Diversification Problems" (with B. Wilson and G. Caprio), *The Economic Journal,* 2000.

"Bank Entry Competition and the Market for Corporate Securities Underwriting" (with A. Gande and M. Puri), *Journal of Financial Economics*, 1999. (Winner of the Fama - DFA award for the best paper in Corporate Finance and Asset Pricing in the JFE for 1999).

"Bank Capital Structure: A Comparative Analysis of US, UK, and Canada" (with B. Wilson), *Journal of Banking and Finance*, 1999.

"Highly Leveraged Loan Transaction Spreads" (with L. Angbazo and J.P. Mei), *Journal of Banking and Finance*, 1998.

"The Effects of Bank Mergers and acquisitions on small business Lending" (with A. Berger, etal), *Journal of Financial Economics*, 1998.

"Credit Risk Measurement: Developments over the last 20 years" (with E. Altman), *Journal of Banking and Finance,* 1998.

"Bank Underwriting of Debt Securities: Modern Evidence," (with A. Gande, M. Puri and I. Walter), *Review of Financial Studies*, 1997.

"An Investigation of the Performance of the U.S. Property-Casualty Insurance Industry" (with N.K. Chidambaran and T. Pugel), *Journal of Risk and Insurance*, 1997.

"Contagious Bank Runs and Panics: Evidence from the 1929-33 Period" (with B. Wilson), *Journal of Financial Intermediation*, 1997.

"Excessive Gambling with Unfavorable Odds: Financial Institutions and Real Estate Investments" (with J.P. Mei), *Review of Economics and Statistics*, 1997.

"Alternative Models for Clearance and Settlement: The Case of the Single European Capital Market" (with I. Giddy and I. Walter), *Journal of Money, Credit and Banking*, 1996.

"Bank Equity Stakes in Borrowing Firms and Financial Distress" (with M. Berlin and K. John), *Review of Financial Studies*, 1996.

"If History Could be Re-run: Pricing Deposit Insurance in 1933" (with B. Wilson), *Journal of Financial Intermediation*, 1995.

"Bank Risk and Too Big to Fail Guarantees: An Asset Pricing Perspective" (with J.P. Mei), *Journal of Real Estate Finance and Economics*, 1995.

"The Effect of Bank Capital Requirements on Bank Off-Balance Sheet Financial Innovations," *Journal of Banking and Finance,* 1995.

"When Does the Prime Rate Change" (with L. Mester), *Journal of Banking and Finance*, 1995.

"Deposit Insurance and Regulatory Forbearance: Are Caps on Insured Deposits Optimal?" (with J.F. Dreyfus and L. Allen), *Journal of Money, Credit and Banking*, 1994.

"Universal Banking and Firm Risk Taking" (with K. John and T. John), *Journal of Banking and Finance*, 1994.

"Banking and Commerce: An Overview of the Policy Issues," *Journal of Banking and Finance*, 1994.

"Time Variation of Risk Premiums for Insurance Companies" (with J.P. Mei), *Journal of Risk and Insurance*, 1994.

"Managers, Owners and the Pricing of Risky Debt: An Empirical Analysis" (with E. Bagnani, N. Milonas, and N. Travlos), *Journal of Finance*, 1994.

"Banking Sector and Restructuring in Eastern Europe" (with A. Sommariva), *Journal of Banking and Finance*, 1993.

"Forbearance and Valuation of Deposit Insurance as a Callable Put" (with L. Allen), *Journal of Banking and Finance*, 1993.

"Prime Rate Changes: Is There An Advantage in Being First?" (with P. Nabar and S. Park), *Journal of Business*, 1993.

"Bank Window-Dressing: Theory and Evidence" (with L. Allen), *Journal of Banking and Finance*, 1992.

"The Pricing of Retail Deposits: Concentration and Information" (with Allen and Udell), *Journal of Financial Intermediation*, 1992.

"Deposit Insurance Reform" (with Berlin, Udell), *Journal of Banking and Finance*, August 1991.

"Additions to Bank Loan-Loss Reserves: Good News or Bad New?" (with T. Grammatikos), *Journal of Monetary Economics*, 1990.

"Ownership Control, Regulation and Bank Risk-Taking" (with Strock and Travlos), *Journal of Finance*, 1990.

"Are Banks Special: The Separation of Banking from Commerce and Interest Rate Risk" (with Yourougou), *Journal of Economics and Business, 1990.*

"The Underpricing of New Issues in Singapore" (with J. Lim), *Journal of Banking and Finance*, 1990.

"Bank Size, Collateral and Net Purchase Behavior in the Federal Funds Market: Empirical Evidence (with Allen and Peristiani), *Journal of Business*, 1989.

"The Effects of Shifts in Monetary Policy and Reserve Accounting Regimes on Bank Reserve Management in the Federal Funds Market" (with T. Urich), *Journal of Banking and Finance,* 1989.

"The Effects of DIDMCA on the Profitability and Risk of Large Commercial Banks and Thrift Institutions' (with J. Aharony and I. Swary), *Journal of Banking and Finance,* 1988.

"The Hedging Performance of ECU Futures" (with S. Sienkiewicz), *Journal of Futures Markets,* 1988.

"Intra- and Inter-Industry Effects of Bank Securities Market Activities: The Case of Discount Brokerage" (with M. Smirlock), *Journal of Financial and Quantitative Analysis*, 1987.

"New Tests of the Parity Hypothesis and Fiscal Policy Effects" (with J. Merrick), *Journal of Monetary Economics,* 1986.

"The Returns and Risks of U.S. Banks' Foreign Currency Activities" (with T. Grammatikos and I. Swary), *Journal of Finance,* 1986.

"The Determinants of Country Risk: A Selective Survey of the Literature," *Journal of Banking and Finance (Supplement)*, 1986.

"An Examination of the Contagion Effect in the International Loan Market," *Journal of Banking and Finance (Supplement)*, 1986.

"The Effects of a Shift in Monetary Policy Regime on the Profitability and Risk of Commercial Banks" (with J. Aharony and I. Swary), *Journal of Monetary Economics*, 1986.

"The Large-Small Bank Dichotomy in the Federal Funds Market" (with L. Allen), *Journal of Banking and Finance,* 1986.

"Futures Price Variability: A Test of Maturity and Volume Effects" (with T. Grammatikos), *Journal of Business,* 1986.

"A Micro-Model of the Federal Funds Market" (with T. Ho), *Journal of Finance,* 1985.

"The Effects of the International Banking Act on Domestic Bank Profitability and Risk" (with J. Aharony and I. Swary), *Journal of Money, Credit and Banking,* 1985.

"Bank Regulation and Monetary Policy," *Journal of Money, Credit and Banking,* 1985.

"On Constructing the Group Utility Function of a Loan Syndicate" (with D. Gandhi and R. Hausman), *Journal of Banking and Finance,* 1985.

"On the Constancy of the International Real Rate of Interest" (with R. Tress), *Journal of Monetary Economics,* 1984.

"Fixed Rate Loan Commitments, Takedown Risk and the Dynamics of Hedging with Futures" (with T. Ho), *Journal of Financial and Quantitative Analysis,* 1983.

"Asymmetric Information, Regulatory Lag and the Value of Incentive Contracts" (with K. John), *Journal of Finance,* 1983.

"Stability and the Hedging Performance of Foreign Exchange Futures (with T. Grammatikos), *Journal of Futures Markets,* 1983.

"The Determinants of Bank Interest Margins: Theory and Empirical Evidence" (with T. Ho), *Journal of Financial and Quantitative Analysis*, November 1981.

"The Growth of Organizational Forms of Foreign Banks in the U.S." (with L. Goldberg), *Journal of Money, Credit and Banking,* August 1981.

"The Investors' Gains from International Portfolio Investment" (with D. Gandhi, *et al.*), *Journal of Banking and Finance,* June 1981.

"A Catastrophe Model of Bank Failure" (with T. Ho), *Journal of Finance,* December 1980.

"Determinants of Foreign Bank Activity in the United States," *Journal of Banking and Finance,* December 1980.

"The Causes of U.S. Bank Expansion Overseas: The Case of Great Britain" (with L. Goldberg), *Journal of Money, Credit and Banking,* November 1980.

"A Stochastic Dominance Analysis of Unit Trust Performance" (with R. Woodward and C. Ward), *Journal of Financial and Quantitative Analysis*, June 1980.

"Bid Behavior and the Determination of Treasury Bill Rates" (with C. Ward), *Oxford Bulletin of Economics and Statistics,* August 1979.

"Risk, Regulation and Performance of Clearing Banks, 1965-1975" (with C. Ward), *Journal of Industrial Economics,* December 1976.

(ii) Books/Monographs

Technology and the Regulation of Financial Markets (with L. White), Lexington Books, 1985 (reprinted by Beard Books, 2003).

Off Balance Sheet Activities (with J. Ronen and A. Sondhi), Dow-Jones, 1990.

IPO's and Venture Capitalists: A Test of the Dynamic Strategy Hypothesis (with J. Lim), ICFA, 1990.

The Management and Regulation of Banks: A Book of Reading (with G. Udell and L. White), Bristlecone Books, 1992.

Universal Banking in the U.S.? (with I. Walter), Oxford University Press, 1994.

Financial Institutions Management: A Risk Management Approach, Irwin/McGraw-Hill, (1st edition), 1994 (2nd edition), 1996 (3rd edition), 1999 (4th edition), 2002 (5th edition), 2005 (6th edition), 2007.

Financial System Design: Universal Banking Considered (with I. Walter), Irwin, 1996.

China's Emerging Capital Markets (with A. Kumar, etal), Financial Times Publishing, 1997.

Fundamentals of Financial Institutions Management (with M. Cornett), Irwin/McGraw-Hill, (1st edition), 1999.

Credit Risk Measurement: Value at Risk and Other New Paradigms, John Wiley and Sons, (1st edition), 1999 (2nd edition), 2002, (3rd edition) 2010 (forthcoming).

Financial Markets and Institutions: A Modern Perspective (with M. Cornett); Irwin/McGraw-Hill, (1st edition), 2000 (2nd edition), 2003, (3rd edition) 2006, (4th edition), 2008.

Understanding Market, Credit and Operational Risk (with K. Boudoukh and L. Allen) Blackwell, (1st edition), 2003.

(iii) Articles in Books (selected)

"The Effect of a Dual Exchange Market on Spot and Commodity Prices in the US and UK" (with D. Emanual), *Proceedings of the International Research Seminar on Futures Markets*, Chicago Board of Trade, 1981.

"A Catastrophe Theory in Banking and Finance" (with T. Ho) in G. Szego and A. Cellina (eds.), *New Techniques for Economic Analysis,* Academic Press, 1982.

"Conflicts of Interest: The Case of Commercial *Bank* and Their Corporate Securities Underwriting Affiliates" in I. Walter (ed.), *Deregulating Wall Street*, John Wiley and Sons, 1985.

"An Economic Perspective on Bank Uniqueness and Corporate Securities Activities" in I. Walter (ed.), *Deregulating Wall Street*, John Wiley and Sons, 1985.

"Conflicts of Interest: The Case of Securities Activities of Commercial Banks," *Federal Reserve Bank of Philadelphia Review*, August/September, 1985.

"Seasonality in the Federal Funds Market: The Weekend Game and Other Effect" (with T. Urich) in E. Dimson (ed.), Evidence *on Stock Market Anomalies*, North-Holland, 1987.

"Bank Holding Companies: Structure, Performance and Reform" in W. Haraf (ed.), *Restructuring the Financial System*, AEI: Washington, D.C. 1989.

"The Inter Bank-Market, Contagion Effects and Financial Crisis" in Portes and Swaboda (ed.), *Threats to International Financial stability*, CEPR and CUP, 1987.

"LDC Debt Rescheduling" (with M. Subrahmanyam), *Federal Reserve Bank of Philadelphia Review*, November/December, 1988.

"SESDAQ: The Early Evidence" (with J. Lim) in Chang and Rhee (eds.), *Pacific Basin Capital Markets Research,* Elsevier, 1989.

"Forward Foreign Exchange Markets in Developing Countries" in R. O'Brien and T. Datta (eds.), *International Economics and Financial Markets,* O.U.P., 1989.

"Why Are So Many New Issues Underpriced?" *Federal Reserve Bank of Philadelphia Review,* 1990.

"German Banking and Monetary Policy" in C. Barfied and M. Perlman (eds.) *Capital Markets and Trade: The U.S. Faces a United Europe,* AEI: Washington, D.C. 1992.

"Bank Deregulation and Monetary Policy" and "Discount Brokers" in the *New Palgrave Dictionary of Money and Finance,* 1993.

"The Reconfiguration of Banking and Capital Markets in Eastern Europe" (with I. Walter) in *The Transformation of the Socialist Economies,* H. Siebert (ed.) J.C.B. Mohr, Tubingen, Germany, 1992.

"Clearance and Settlement (with I. Giddy and I. Walter) in *The European Equity Markets*, B. Steil (ed), RIIA, London, 1996.

"A Survey of Cyclical Effects in Credit Risk Models in *Credit Ratings* (M. Ong (ed.)), Risk Books: London, 2003.

(iv) Working Papers

"Diversification or Specialization? An Analysis of Distance and Collaboration in Loan Syndication Networks" (with J. Cai and S. Steffen).

"Do Hedge Funds Trade on Private Information? Evidence from Syndicated Lending and Short Selling" (with N. Massoud, D. Nandy and K. Song), *Journal of Financial Economics*, revise and resubmit.

"The Role of Lending Banks in Forced CEO Turnovers" (with Sadi Ozelge).

"The Role of Banks in Dividend Policy" (with L. Allen, A. Gottesman and Y. Tang).

"Who Makes Credit Card Mistakes?" (with N. Massoud and B. Scholnick), presented at *AEA* (2008).

"Are Initial Returns and Underwriting Spreads Complements or Substitutes?" (with D. Palia), *Financial Management*, revise and resubmit.

"Are Banks Still Special When There Is a Secondary Market for Bank Loans?" (with A. Gande), *Journal of Finance*, revise and resubmit.

"The Costs of Being Private: Evidence from the Loan Market (with S. Steffen).

Editorial Positions (Selected)

Editor, Journal of Banking and Finance (1994 - 2007)
Editor, Financial Markets, Instruments and Institutions (1992 -)
Editor, Salomon Brothers Center Monograph in Finance and Economics (1984-91)
Advisory Editor, Journal of Money, Credit and Banking (2001 -)
Associate Editor, Journal of Money, Credit and Banking (1995-2001)
Associate Editor, Financial Management (1993 - 2006)

Research Fellowships

Yamaichi Senior Research Fellow in Finance 1988-1991
Salomon Brothers Center Research Fellow 1986-1987
Bank and Financial Analysts Research Fellow 1987-1988

Ph.D. Supervision

V. Ivashina (Chair), C. Harm (Chair), J. Lim (Chair), A. Moskowitz, D. Palia (Chair), M. Puri (Chair), B. Soubra, P. Yourougou (Chair), A. Gande, N. Travlos, J. Meehan, T. Grammatikos, S. Dahiya (Chair), A. Cebenoyan (Chair), A. Mozumdar, E. Kraizberg (Chair), G. DeLong (Chair), G. Vasudevan, H. Sim (Chair), J. Rungkasiri, L. Angbazo (Chair), N. Horrell (Chair), V. Gargalas (Chair), A. Srinivasan (Chair), S. Bharath (Chair),V. Acharya, T.T. Ram Mohan, J. Sunder, L. Allen (Chair), F. Alvaraz (Chair), D. Ross (Chair), Y. Lu (Chair), S. Ozelge (Chair).

Keynote Speaker

Northern Finance Association (Toronto), October (2007)
Henry Thornton Lecture (London), October (2007)
Campus for Finance, WHU, Otto Beisheim School of Management, Germany, January (2007)
Journal of Banking and Finance, 30th Anniversary Conference, Beijing (2006)

Citigroup Distinguished Speaker, University of Edinburgh, November (2006)
Risk Management Conference, Hofstra University, NY (2006)
Italian Quantitative Economics and Finance Association (AMESAS), Italy (2004)
Pacific Basin Finance, Accounting and Economics Conference, Taiwan (2003)
Australasian Finance Association, Sydney, Australia (2006, 2004, 2003, 2002)
Multinational Finance Association, Cyprus (2002)
Symposium on Finance, Banking and Insurance, Karlsruhe, Germany (2002)
Spanish Finance Association, Segovia, Spain (2001)

Contains Highly Confidential Information

Appendix 2

List of Documents and Other Materials Reviewed and Considered

Bates Numbered Documents

AK-LB-BANKR 000001

BCI-CG00033581--BCI-CG00033585

BCI-CG00064703

BCI-EX-00115843 -- BCI-EX-00115846

CMTE0002282

LAZ-A-00004455

LAZ-A-00004467

LAZ-A-00004483

LAZ-A-00004547 -- LAZ-A-00004548

LAZ-B-00003023 -- LAZ-B-00003048

LAZ-C-00025369 -- LAZ-C-00025374

LAZ-C-00025773 -- LAZ-C-00025791

LAZ-C-00026899 -- LAZ-C-00026901

LAZ-C-00026921 -- LAZ-C-00026922

LAZ-C-00047975 -- LAZ-C-00047978

LBHI 008339

LBHI 008340

LBHI 017761 - LBHI 017764

Deposition Transcripts

Deposition of Alastair Blackwell, *In re: Lehman Brothers Holdings Inc., et al., Debtors.*, Case No. 08-13555 (JMP) (Bankr. S.D.N.Y. Aug. 7, 2009).

Deposition of Alex Kirk, *In re: Lehman Brothers Holdings Inc., et al., Debtors.*, Case No. 08-13555 (JMP) (Bankr. S.D.N.Y. Aug. 31, 2009).

Deposition of Archibald Cox, *In re: Lehman Brothers Holdings Inc., et al., Debtors.*, Case No. 08-13555 (JMP) (Bankr. S.D.N.Y. Sep. 11, 2009).

Deposition of Bart McDade, *In re: Lehman Brothers Holdings Inc., et al., Debtors.*, Case No. 08-13555 (JMP) (Bankr. S.D.N.Y. Sep. 2, 2009).

Deposition of Bryan Marsal, *In re: Lehman Brothers Holdings Inc., et al., Debtors.*, Case No. 08-13555 (JMP) (Bankr. S.D.N.Y. Dec. 22, 2009).

Deposition of Daniel Joseph Fleming, *In re: Lehman Brothers Holdings Inc., et al., Debtors.*, Case No. 08-13555 (JMP) (Bankr. S.D.N.Y. Aug. 28, 2009).

Deposition of David Petrie, *In re: Lehman Brothers Holdings Inc., et al., Debtors.*, Case No. 08-13555 (JMP) (Bankr. S.D.N.Y. Aug. 26, 2009).

Deposition of Eric Jonathan Felder, *In re: Lehman Brothers Holdings Inc., et al., Debtors.*, Case No. 08-13555 (JMP) (Bankr. S.D.N.Y. Jul. 31, 2009).

Deposition of Gary Romain, *In re: Lehman Brothers Holdings Inc., et al., Debtors.*, Case No. 08-13555 (JMP) (Bankr. S.D.N.Y. Sep. 10, 2009).

Deposition of Gerard LaRocca, *In re: Lehman Brothers Holdings Inc., et al., Debtors.*, Case No. 08-13555 (JMP) (Bankr. S.D.N.Y. Aug. 19, 2009).

Deposition of Hugh McGee, *In re: Lehman Brothers Holdings Inc., et al., Debtors.*, Case No. 08-13555 (JMP) (Bankr. S.D.N.Y. Aug. 10, 2009).

Deposition of Ian Lowitt, *In re: Lehman Brothers Holdings Inc., et al., Debtors.*, Case No. 08-13555 (JMP) (Bankr. S.D.N.Y. Aug. 20, 2009).

Deposition of James B Kobak Jr., *In re: Lehman Brothers Holdings Inc., et al., Debtors.*, Case No. 08-13555 (JMP) (Bankr. S.D.N.Y. Dec. 7, 2009).

Deposition of James Hraska, *In re: Lehman Brothers Holdings Inc., et al., Debtors.*, Case No. 08-13555 (JMP) (Bankr. S.D.N.Y. Aug. 14, 2009).

Deposition of James Seery, *In re: Lehman Brothers Holdings Inc., et al., Debtors.*, Case No. 08-13555 (JMP) (Bankr. S.D.N.Y. Sep. 3, 2009).

Deposition of Jasen Yang, *In re: Lehman Brothers Holdings Inc., et al., Debtors.*, Case No. 08-13555 (JMP) (Bankr. S.D.N.Y. Sep. 4, 2009).

Deposition of Jerry del Missier, *In re: Lehman Brothers Holdings Inc., et al., Debtors.*, Case No. 08-13555 (JMP) (Bankr. S.D.N.Y. Sep. 1, 2009).

Deposition of John Coghlan, *In re: Lehman Brothers Holdings Inc., et al., Debtors.*, Case No. 08-13555 (JMP) (Bankr. S.D.N.Y. Aug. 13, 2009).

Deposition of John Rodefeld, *In re: Lehman Brothers Holdings Inc., et al., Debtors.*, Case No. 08-13555 (JMP) (Bankr. S.D.N.Y. Aug. 27, 2009).

Deposition of John Varley, *In re: Lehman Brothers Holdings Inc., et al., Debtors.*, Case No. 08-13555 (JMP) (Bankr. S.D.N.Y. Sep. 3, 2009).

Deposition of John Varley, *In re: Lehman Brothers Holdings Inc., et al., Debtors.*, Case No. 08-13555 (JMP) (Bankr. S.D.N.Y. Sep. 11, 2009).

Deposition of Mark J. Shapiro, *In re: Lehman Brothers Holdings Inc., et al., Debtors.*, Case No. 08-13555 (JMP) (Bankr. S.D.N.Y. Aug. 7, 2009).

Deposition of Martin Kelly, *In re: Lehman Brothers Holdings Inc., et al., Debtors.*, Case No. 08-13555 (JMP) (Bankr. S.D.N.Y. Aug. 18, 2009).

Deposition of Martin Kelly, *In re: Lehman Brothers Holdings Inc., et al., Debtors.*, Case No. 08-13555 (JMP) (Bankr. S.D.N.Y. Nov. 20, 2009).

Deposition of Michael Klein, *In re: Lehman Brothers Holdings Inc., et al., Debtors.*, Case No. 08-13555 (JMP) (Bankr. S.D.N.Y. Sep. 12, 2009).

Deposition of Mike Keegan, *In re: Lehman Brothers Holdings Inc., et al., Debtors.*, Case No. 08-13555 (JMP) (Bankr. S.D.N.Y. Aug. 28, 2009).

Deposition of Nancy Denig, *In re: Lehman Brothers Holdings Inc., et al., Debtors.*, Case No. 08-13555 (JMP) (Bankr. S.D.N.Y. Aug. 21, 2009).

Deposition of Paolo Tonucci, *In re: Lehman Brothers Holdings Inc., et al., Debtors.*, Case No. 08-13555 (JMP) (Bankr. S.D.N.Y. Aug. 14, 2009).

Deposition of Patrick Clackson, *In re: Lehman Brothers Holdings Inc., et al., Debtors.*, Case No. 08-13555 (JMP) (Bankr. S.D.N.Y. Sep. 4, 2009).

Deposition of Paul Exall, *In re: Lehman Brothers Holdings Inc., et al., Debtors.*, Case No. 08-13555 (JMP) (Bankr. S.D.N.Y. Aug. 27, 2009).

Deposition of Philip E. Kruse, *In re: Lehman Brothers Holdings Inc., et al., Debtors.*, Case No. 08-13555 (JMP) (Bankr. S.D.N.Y. Dec. 17, 2009).

Deposition of Rich Ricci, *In re: Lehman Brothers Holdings Inc., et al., Debtors.*, Case No. 08-13555 (JMP) (Bankr. S.D.N.Y. Sep. 8, 2009).

Deposition of Robert Azerad, *In re: Lehman Brothers Holdings Inc., et al., Debtors.*, Case No. 08-13555 (JMP) (Bankr. S.D.N.Y. Aug. 17, 2009).

Deposition of Robert Edward Diamond Jr., *In re: Lehman Brothers Holdings Inc., et al., Debtors.*, Case No. 08-13555 (JMP) (Bankr. S.D.N.Y. Sep. 11, 2009).

Deposition of Saul Burian, *In re: Lehman Brothers Holdings Inc., et al., Debtors.*, Case No. 08-13555 (JMP) (Bankr. S.D.N.Y. Dec. 17, 2009).

Deposition of Stephen King, *In re: Lehman Brothers Holdings Inc., et al., Debtors.*, Case No. 08-13555 (JMP) (Bankr. S.D.N.Y. Sep. 10, 2009).

Deposition of Steven Berkenfeld, *In re: Lehman Brothers Holdings Inc., et al., Debtors.*, Case No. 08-13555 (JMP) (Bankr. S.D.N.Y. Aug. 6, 2009).

Deposition of Harvey Miller, *In re: Lehman Brothers Holdings Inc., et al., Debtors.*, Case No. 08-13555 (JMP) (Bankr. S.D.N.Y. Jan. 7, 2010).

Deposition Exhibits

Exhibit 1	Exhibit 14	Exhibit 27	Exhibit 40
Exhibit 2	Exhibit 15	Exhibit 28	Exhibit 41
Exhibit 3	Exhibit 16	Exhibit 29	Exhibit 42
Exhibit 4	Exhibit 17	Exhibit 30	Exhibit 43
Exhibit 5	Exhibit 18	Exhibit 31	Exhibit 44
Exhibit 6	Exhibit 19	Exhibit 32	Exhibit 45
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Exhibit 90B
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Exhibit 143A

Contains Highly Confidential Information

Exhibit 143B	Exhibit 156A	Exhibit 180	Exhibit 205
Exhibit 144A	Exhibit 156B	Exhibit 181	Exhibit 206
Exhibit 144B	Exhibit 157A	Exhibit 182	Exhibit 207
Exhibit 145A	Exhibit 158A	Exhibit 183	Exhibit 208
Exhibit 145B	Exhibit 159A	Exhibit 184	Exhibit 209
Exhibit 146A	Exhibit 160A	Exhibit 185	Exhibit 210
Exhibit 146B	Exhibit 161A	Exhibit 186	Exhibit 211
Exhibit 147A	Exhibit 162A	Exhibit 187	Exhibit 212
Exhibit 147B	Exhibit 163A	Exhibit 188	Exhibit 213
Exhibit 148A	Exhibit 164A	Exhibit 189	Exhibit 214
Exhibit 148B	Exhibit 165A	Exhibit 190	Exhibit 215
Exhibit 149A	Exhibit 166A	Exhibit 191	Exhibit 216
Exhibit 149B	Exhibit 167A	Exhibit 192	Exhibit 217
Exhibit 150A	Exhibit 168A	Exhibit 193	Exhibit 218
Exhibit 150B	Exhibit 169A	Exhibit 194	Exhibit 219
Exhibit 151A	Exhibit 170A	Exhibit 195	Exhibit 220
Exhibit 151B	Exhibit 171A	Exhibit 196	Exhibit 221
Exhibit 152A	Exhibit 172A	Exhibit 197	Exhibit 222
Exhibit 152B	Exhibit 173A	Exhibit 198	Exhibit 223
Exhibit 153A	Exhibit 174	Exhibit 199	Exhibit 224
Exhibit 153B	Exhibit 175	Exhibit 200	Exhibit 225
Exhibit 154A	Exhibit 176	Exhibit 201	Exhibit 226
Exhibit 154B	Exhibit 177	Exhibit 202	Exhibit 227
Exhibit 155A	Exhibit 178	Exhibit 203	Exhibit 228
Exhibit 155B	Exhibit 179	Exhibit 204	Exhibit 229

Exhibit 230	Exhibit 255	Exhibit 279B	Exhibit 295A
Exhibit 231	Exhibit 256	Exhibit 280A	Exhibit 295B
Exhibit 232	Exhibit 257	Exhibit 280B	Exhibit 296A
Exhibit 233	Exhibit 258	Exhibit 281A	Exhibit 296B
Exhibit 234	Exhibit 259	Exhibit 281B	Exhibit 297A
Exhibit 235	Exhibit 260	Exhibit 282A	Exhibit 297B
Exhibit 236	Exhibit 261	Exhibit 282B	Exhibit 298A
Exhibit 237	Exhibit 262	Exhibit 283A	Exhibit 298B
Exhibit 238	Exhibit 263	Exhibit 283B	Exhibit 299A
Exhibit 239	Exhibit 264	Exhibit 284A	Exhibit 299B
Exhibit 240	Exhibit 265	Exhibit 284B	Exhibit 300A
Exhibit 241	Exhibit 266	Exhibit 285A	Exhibit 300B
Exhibit 242	Exhibit 267	Exhibit 285B	Exhibit 301A
Exhibit 243	Exhibit 268	Exhibit 286A	Exhibit 301B
Exhibit 244	Exhibit 269	Exhibit 286B	Exhibit 302A
Exhibit 245	Exhibit 270	Exhibit 287A	Exhibit 302B
Exhibit 246	Exhibit 271	Exhibit 287B	Exhibit 303A
Exhibit 247	Exhibit 272	Exhibit 288B	Exhibit 303B
Exhibit 248	Exhibit 273	Exhibit 289B	Exhibit 304A
Exhibit 249	Exhibit 274	Exhibit 290B	Exhibit 304B
Exhibit 250	Exhibit 275	Exhibit 291B	Exhibit 305A
Exhibit 251	Exhibit 276	Exhibit 292B	Exhibit 305B
Exhibit 252	Exhibit 277	Exhibit 293B	Exhibit 306A
Exhibit 253	Exhibit 278	Exhibit 294A	Exhibit 306B
Exhibit 254	Exhibit 279A	Exhibit 294B	Exhibit 307A

Contains Highly Confidential Information

Exhibit 307B
Exhibit 308A
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Exhibit 469B
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Exhibit 472B

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Exhibit 480B

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Legal Filings

Affidavit of Daniel McIsaac, *In re: Lehman Brothers Holdings Inc., et al., Debtors.*, Case No. 08-01420 (JMP) SIPA (Bankr. S.D.N.Y. Oct. 5, 2009).

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Appendix to Debtor's Motion for an Order, Pursuant to Fed. R. Civ. P. 60 and Fed. R. Bankr. P. 9024, Modifying the September 20, 2008 Sale Order and Granting Other Relief: Volume II, *In re: Lehman Brothers Holdings Inc., et al., Debtors.*, Case No. 08-13555 (JMP) (Bankr. S.D.N.Y.).

Appendix to Debtor's Motion for an Order, Pursuant to Fed. R. Civ. P. 60 and Fed. R. Bankr. P. 9024, Modifying the September 20, 2008 Sale Order and Granting Other Relief: Volume III, *In re: Lehman Brothers Holdings Inc., et al., Debtors.*, Case No. 08-13555 (JMP) (Bankr. S.D.N.Y.).

Appendix to Debtor's Motion for an Order, Pursuant to Fed. R. Civ. P. 60 and Fed. R. Bankr. P. 9024, Modifying the September 20, 2008 Sale Order and Granting Other Relief: Volume IV, *In re: Lehman Brothers Holdings Inc., et al., Debtors.*, Case No. 08-13555 (JMP) (Bankr. S.D.N.Y.).

Appendix to Debtor's Motion for an Order, Pursuant to Fed. R. Civ. P. 60 and Fed. R. Bankr. P. 9024, Modifying the September 20, 2008 Sale Order and Granting Other Relief: Volume V, *In re: Lehman Brothers Holdings Inc., et al., Debtors.*, Case No. 08-13555 (JMP) (Bankr. S.D.N.Y.).

Appendix Volume I to Motion of Official Committee of Unsecured Creditors of Lehman Brothers Holdings Inc., et al., Pursuant to 11 U.S.C. § 105(a) Fed. R. Civ. P. 60(b) and Fed. R. Bankr. P. 9024, for Relief from Order Under 11 U.S.C. § 105(a), 363, and 365 and Federal Rules of Bankruptcy Procedure 2002, 6004, and 6006 Authorizing and Approving (A) Sale of Purchased Assets Free and Clear of Liens and Other Interests and (B) Assumption and Assignment of Executory Contracts and Unexpired Leases, Dated September 20, 2008 (and Related SIPA Sale Order) and Joinder in Debtors' and SIPA Trustees Motions for an Order Under Rule 60(b) to Modify Sale Order, *In re: Lehman Brothers Holdings Inc., et al., Debtors.*, Case No. 08-13555 (JMP) and Case No. 08-01420 (JMP) (Bankr. S.D.N.Y.).

Appendix Volume II to Motion of Official Committee of Unsecured Creditors of Lehman Brothers Holdings Inc., et al., Pursuant to 11 U.S.C. § 105(a) Fed. R. Civ. P. 60(b) and Fed. R. Bankr. P. 9024, for Relief from Order Under 11 U.S.C. § 105(a), 363, and 365 and Federal Rules of Bankruptcy Procedure 2002, 6004, and 6006 Authorizing and Approving (A) Sale of Purchased Assets Free and Clear of Liens and Other Interests and (B) Assumption and Assignment of Executory Contracts and Unexpired Leases, Dated September 20, 2008 (and Related SIPA Sale Order) and Joinder in Debtors' and SIPA Trustees Motions for an Order Under Rule 60(b) to Modify Sale Order, *In re: Lehman Brothers Holdings Inc., et al., Debtors.*, Case No. 08-13555 (JMP) and Case No. 08-01420 (JMP) (Bankr. S.D.N.Y.).

Appendix Volume III to Motion of Official Committee of Unsecured Creditors of Lehman Brothers Holdings Inc., et al., Pursuant to 11 U.S.C. § 105(a) Fed. R. Civ. P. 60(b) and Fed. R. Bankr. P. 9024, for Relief from Order Under 11 U.S.C. § 105(a), 363, and 365 and Federal Rules of Bankruptcy Procedure 2002, 6004, and 6006 Authorizing and Approving (A) Sale of Purchased Assets Free and Clear of Liens and Other Interests and (B) Assumption and Assignment of Executory Contracts and Unexpired Leases, Dated September 20, 2008 (and Related SIPA Sale Order) and Joinder in Debtors' and SIPA Trustees Motions for an Order Under Rule 60(b) to Modify Sale Order, *In re: Lehman Brothers Holdings Inc., et al., Debtors.*, Case No. 08-13555 (JMP) and Case No. 08-01420 (JMP) (Bankr. S.D.N.Y.).

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Appendix 3

The Financial Crisis: A Timeline of Events and Policy Actions

(Federal Reserve Bank of St. Louis)

February 27, 2007 | Freddie Mac Press Release

The Federal Home Loan Mortgage Corporation (Freddie Mac) announces that it will no longer buy the most risky subprime mortgages and mortgage-related securities.

April 2, 2007 | SEC Filing

New Century Financial Corporation, a leading subprime mortgage lender, files for Chapter 11
bankruptcy protection.

June 1, 2007 | Congressional Testimony

Standard and Poor's and Moody's Investor Services downgrade over 100 bonds backed by
second-lien subprime mortgages.

June 7, 2007

Bear Stearns informs investors that it is suspending redemptions from its High-Grade Structured
Credit Strategies Enhanced Leverage Fund.

June 28, 2007 | Federal Reserve Press Release

The Federal Open Market Committee (FOMC) votes to maintain its target for the federal funds rate at 5.25 percent.

July 11, 2007 | Standard and Poor's Ratings Direct

Standard and Poor's places 612 securities backed by subprime residential mortgages on a credit
watch.

July 24, 2007 | SEC Filing

Countrywide Financial Corporation warns of "difficult conditions."

July 31, 2007 | US Bankruptcy Filing

Bear Stearns liquidates two hedge funds that invested in various types of mortgage-backed securities.

August 6, 2007 | SEC Filing

American Home Mortgage Investment Corporation files for Chapter 11 bankruptcy protection.

August 7, 2007 | Federal Reserve Press Release

The FOMC votes to maintain its target for the federal funds rate at 5.25 percent.

August 9, 2007 | BNP Paribas Press Release

BNP Paribas, France's largest bank, halts redemptions on three investment funds.

August 10, 2007 | Federal Reserve Press Release

The Federal Reserve Board announces that it "will provide reserves as necessary...to promote trading in the federal funds market at rates close to the FOMC's target rate of 5.25 percent. In current circumstances, depository institutions may experience unusual funding needs because of dislocations in money and credit markets. As always, the discount window is available as a source of funding."

August 16, 2007 | SEC Filing

Fitch Ratings downgrades Countrywide Financial Corporation to BBB+, its third lowest investment-grade rating, and Countrywide borrows the entire $11.5 billion available in its credit lines with other banks.

August 17, 2007 | Federal Reserve Press Release

The Federal Reserve Board votes to reduce the primary credit rate 50 basis points to 5.75 percent, bringing the rate to only 50 basis points above the FOMC's federal funds rate target. The Board also increases the maximum primary credit borrowing term to 30 days, renewable by the borrower.

September 14, 2007 | United Kingdom Treasury Department Press Release

The Chancellor of the Exchequer authorizes the Bank of England to provide liquidity support for
Northern Rock, the United Kingdom's fifth-largest mortgage lender.

September 18, 2007 | Federal Reserve Press Release

The FOMC votes to reduce its target for the federal funds rate 50 basis points to 4.75 percent. The Federal Reserve Board votes to reduce the primary credit rate 50 basis points to 5.25 percent.

October 10, 2007 | Hope Now Press Release | Treasury Department Press Release

US Treasury Secretary Paulson announces the HOPE NOW initiative, an alliance of investors, servicers, mortgage market participants, and credit and homeowners' counselors encouraged by the Treasury Department and the Department of Housing and Urban Development.

October 15, 2007 | Bank of America Press Release

Citigroup, Bank of America, and JPMorgan Chase announce plans for an $80 billion Master
Liquidity Enhancement Conduit to purchase highly rated assets from existing special purpose vehicles.

October 31, 2007 | Federal Reserve Press Release

The FOMC votes to reduce its target for the federal funds rate 25 basis points to 4.50 percent. The Federal Reserve Board votes to reduce the primary credit rate 25 basis points to 5.00 percent.

November 1, 2007 | Additional Information

Financial market pressures intensify, reflected in diminished liquidity in interbank funding markets.

December 11, 2007 | Federal Reserve Press Release

The FOMC votes to reduce its target for the federal funds rate 25 basis points to 4.25 percent. The Federal Reserve Board votes to reduce the primary credit rate 25 basis points to 4.75 percent.

December 12, 2007 | Federal Reserve Press Release | Additional Information

The Federal Reserve Board announces the creation of a Term Auction Facility (TAF) in which fixed amounts of term funds will be auctioned to depository institutions against a wide variety of collateral. The FOMC authorizes temporary reciprocal currency arrangements (swap lines) with the European Central Bank (ECB) and the Swiss National Bank (SNB). The Fed states that it will provide up to $20 billion and $4 billion to the ECB and SNB, respectively, for up to 6 months.

December 21, 2007 | Federal Reserve Press Release

The Federal Reserve Board announces that TAF auctions will be conducted every two weeks as
long as financial market conditions warrant.

December 21, 2007 | Bank of America Press Release

Citigroup, JPMorgan Chase, and Bank of America abandon plans for the Master Liquidity
Enhancement Conduit, announcing that the fund "is not needed at this time."

January 11, 2008 | Bank of America Press Release

Bank of America announces that it will purchase Countrywide Financial in an all-stock transaction worth approximately $4 billion.

January 18, 2008 | SEC Filing

Fitch Ratings downgrades Ambac Financial Group's insurance financial strength rating to AA, Credit Watch Negative. Standard and Poor's place Ambac's AAA rating on CreditWatch Negative.

January 22, 2008 | Federal Reserve Press Release

In an intermeeting conference call, the FOMC votes to reduce its target for the federal funds rate 75 basis points to 3.5 percent. The Federal Reserve Board votes to reduce the primary credit rate 75 basis points to 4 percent.

January 30, 2008 | Federal Reserve Press Release

The FOMC votes to reduce its target for the federal funds rate 50 basis points to 3 percent. The
Federal Reserve Board votes to reduce the primary credit rate 50 basis points to 3.5 percent.

February 13, 2008 | Public Law 110-185

President Bush signs the Economic Stimulus Act of 2008 (Public Law 110-185) into law.

February 17, 2008 | United Kingdom Treasury Department Press Release

Northern Rock is taken into state ownership by the Treasury of the United Kingdom.

March 5, 2008 | Carlyle Capital Corporation Press Release

Carlyle Capital Corporation receives a default notice after failing to meet margin calls on its mortgage bond fund.

March 7, 2008 | Federal Reserve Press Release

The Federal Reserve Board announces $50 billion TAF auctions on March 10 and March 24 and extends the TAF for at least 6 months. The Board also initiates a series of term repurchase transactions, expected to cumulate to $100 billion, conducted as 28-day term repurchase agreements with primary dealers.

March 11, 2008 | Federal Reserve Press Release | Additional Information

The Federal Reserve Board announces the creation of the Term Securities Lending Facility
(TSLF), which will lend up to $200 billion of Treasury securities for 28-day terms against federal agency debt, federal agency residential mortgage-backed securities (MBS), non-agency AAA/Aaa private label residential MBS, and other securities. The FOMC increases its swap lines with the ECB by $10 billion and the Swiss National Bank by $2 billion and also extends these lines through September 30, 2008.

March 14, 2008 | Federal Reserve Press Release

The Federal Reserve Board approves the financing arrangement announced by JPMorgan Chase and Bear Stearns [see note for March 24]. The Federal Reserve Board also announces they are "monitoring market developments closely and will continue to provide liquidity as necessary to promote the orderly function of the financial system."

March 16, 2008 | Federal Reserve Press Release | Additional Information

The Federal Reserve Board establishes the Primary Dealer Credit Facility (PDCF), extending credit to primary dealers at the primary credit rate against a broad range of investment grade credit to primary dealers at the primary credit rate against a broad range of investment grade securities. The Federal Reserve Board votes to reduce the primary credit rate 25 basis points to
3.25 percent, lowering the spread between the primary credit rate and FOMC target for the federal funds rate to 25 basis points. The Board also votes to increase the maximum maturity of primary credit loans to 90 days.

March 18, 2008 | Federal Reserve Press Release

The FOMC votes to reduce its target for the federal funds rate 75 basis points to 2.25 percent. The Federal Reserve Board votes to reduce the primary credit rate 75 basis points to 2.50 percent.

March 24, 2008 | Federal Reserve Bank of New York Press Release

The Federal Reserve Bank of New York announces that it will provide term financing to facilitate JPMorgan Chase & Co.'s acquisition of The Bear Stearns Companies Inc. A limited liability company (Maiden Lane) is formed to control $30 billion of Bear Stearns assets that are pledged as security for $29 billion in term financing from the New York Fed at its primary credit rate. JPMorgan Chase will assume the first $1 billion of any losses on the portfolio.

April 30, 2008 | Federal Reserve Press Release

The FOMC votes to reduce its target for the federal funds rate 25 basis points to 2 percent. The
Federal Reserve Board votes to reduce the primary credit rate 25 basis points to 2.25 percent.

May 2, 2008 | Federal Reserve Press Release

The FOMC expands the list of eligible collateral for Schedule 2 TSLF auctions to include AAA/Aaa-rated asset-backed securities, in addition to already eligible residential and commercial MBS and agency collateralized mortgage obligations. The FOMC also increases existing swap lines with the ECB by $20 billion and with the Swiss National Bank by $6 billion. The Federal Reserve Board expands TAF auctions from`$50 billion to $75 billion.

June 5, 2008 | Federal Reserve Press Release

The Federal Reserve Board announces approval of the notice of Bank of America to acquire Countrywide Financial Corporation.

June 5, 2008 | SEC Filing

Standard and Poor's downgrades monoline bond insurers AMBAC and MBIA from AAA to AA.

June 25, 2008 | Federal Reserve Press Release

The FOMC votes to maintain its target for the federal funds rate at 2.00 percent.

July 11, 2008 | FDIC Press Release

The Office of Thrift Supervision closes IndyMac Bank, F.S.B. The Federal Deposit Insurance
Corporation (FDIC) announces the transfer of the insured deposits and most assets of IndyMac Bank, F.S.B. to IndyMac Federal Bank, FSB.

July 13, 2008 | Federal Reserve Press Release

The Federal Reserve Board authorizes the Federal Reserve Bank of New York to lend to the
Federal National Mortgage Association (Fannie Mae) and the Federal Home Loan Mortgage
Corporation (Freddie Mac), should such lending prove necessary.

July 13, 2008 | Treasury Department Press Release

The US Treasury Department announces a temporary increase in the credit lines of Fannie Mae and Freddie Mac and a temporary authorization for the Treasury to purchase equity in either GSE if needed.

July 15, 2008 | SEC Press Release

The Securities Exchange Commission (SEC) issues an emergency order temporarily prohibiting naked short selling in the securities of Fannie Mae, Freddie Mac, and primary dealers at commercial and investment banks.

July 30, 2008 | Public Law 110-289

President Bush signs into law the Housing and Economic Recovery Act of 2008 (Public Law 110-289), which, among other provisions, authorizes the Treasury to purchase GSE obligations and reforms the regulatory supervision of the GSEs under a new Federal Housing Finance Agency.

July 30, 2008 | Federal Reserve Press Release

The Federal Reserve Board extends the TSLF and PDCF through January 30, 2009, introduces auctions of options on $50 billion of draws on the TSLF, and introduces 84-day TAF loans. The FOMC increases its swap line with the ECB to $55 billion.

August 5, 2008 | Federal Reserve Press Release
The FOMC votes to maintain its target for the federal funds rate at 2.00 percent.

August 17, 2008 | Federal Reserve Press Release
Following an intermeeting conference call, the FOMC releases a statement about the current financial market turmoil, and notes that the "downside risks to growth have increased appreciably."

September 7, 2008 | Treasury Department Press Release
The Federal Housing Finance Agency (FHFA) places Fannie Mae and Freddie Mac in government conservatorship. The US Treasury Department announces three additional measures to complement the FHFA's decision: 1) Preferred stock purchase agreements between the Treasury/FHFA and Fannie Mae and Freddie Mac to ensure the GSEs

positive net worth; 2) a new secured lending facility which will be available to Fannie Mae, Freddie Mac, and the Federal Home Loan Banks; and 3) a temporary program to purchase GSE MBS.

September 14, 2008 | Federal Reserve Press Release

The Federal Reserve Board expands the list of eligible collateral for the PDCF to include any collateral that can be pledged in the tri-party repo system of the two major clearing banks. Previously PDCF collateral had been limited to investment-grade debt securities. The Board also expands the list of collateral accepted by TSLF to include all investment-grade debt securities and increases the frequency of Schedule 2 TSLF auctions and total offering to $150 billion. The Board also adopts an interim final rule that provides temporary exceptions to Section 23A of the Federal Reserve Act to allow insured depository institutions to provide liquidity to their affiliates for assets typically funded in the tri-party repo market.

September 15, 2008 | Bank of America Press Release

Bank of America announces its intent to purchase Merrill Lynch & Co. for $50 billion.

September 15, 2008 | SEC Filing

Lehman Brothers Holdings Incorporated files for Chapter 11 bankruptcy protection.

September 16, 2008 | Federal Reserve Press Release

The Federal Reserve Board authorizes the Federal Reserve Bank of New York to lend up to $85
billion to the American International Group (AIG) under Section 13(3) of the Federal Reserve Act.

September 16, 2008 | Federal Reserve Press Release
The FOMC votes to maintain its target for the federal funds rate at 2.00 percent.

September 16, 2008 | Reserve Funds Press Release
The net asset value of shares in the Reserve Primary Money Fund falls below $1, primarily due to losses on Lehman Brothers commercial paper and medium-term notes.

September 17, 2008 | Treasury Department Press Release
The US Treasury Department announces a Supplementary Financing Program consisting of a series of Treasury bill issues that will provide cash for use in Federal Reserve initiatives.

September 17, 2008 | SEC Press Release

The SEC announces a temporary emergency ban on short selling in the stocks of all companies in the financial sector.

September 18, 2008 | Federal Reserve Press Release
The FOMC expands existing swap lines by $180 billion and authorizes new swap lines with the Bank of Japan, Bank of England, and Bank of Canada.

September 19, 2008 | Federal Reserve Press Release
The Federal Reserve Board announces the creation of the Asset-Backed Commercial Paper Money Market Mutual Fund Liquidity Facility (AMLF) to extend non-recourse loans at the primary credit rate to US depository institutions and bank holding companies to finance their purchase of high-quality asset-backed commercial paper from money market mutual funds. The Federal Reserve Board also announces plans to purchase federal agency discount notes (short-term debt obligations issued by Fannie Mae, Freddie Mac, and Federal Home Loan Banks) from primary dealers.

September 19, 2008 | Treasury Department Press Release
The US Treasury Department announces a temporary guaranty program that will make available up to $50 billion from the Exchange Stabilization Fund to guarantee investments in participating money market mutual funds.

September 20, 2008 | Treasury Department Press Release | Draft Legislation
The US Treasury Department submits draft legislation to Congress for authority to purchase troubled assets.

September 21, 2008 | Federal Reserve Press Release
The Federal Reserve Board approves applications of investment banking companies Goldman Sachs and Morgan Stanley to become bank holding companies.

September 24, 2008 | Federal Reserve Press Release
The FOMC establishes new swap lines with the Reserve Bank of Australia and the Sveriges Riksbank for up to $10 billion each and with the Danmarks Nationalbank and the Norges Bank for up to $5 billion each. The swap lines are authorized through January 30, 2009.

September 25, 2008 | Office of Thrift Supervision Press Release
The Office of Thrift Supervision closes Washington Mutual Bank. JPMorgan Chase acquires the banking operations of Washington Mutual in a transaction facilitated by the FDIC.

September 26, 2008 | Federal Reserve Press Release
The FOMC increases existing swap lines with the ECB by $10 billion and the Swiss National Bank by $3 billion.

September 29, 2008 | Federal Reserve Press Release
The FOMC authorizes a $330 billion expansion of swap lines with Bank of Canada, Bank of England, Bank of Japan, Danmarks Nationalbank, ECB, Norges Bank, Reserve Bank of Australia, Sveriges Riksbank, and Swiss National Bank Swap lines outstanding now total $620 billion. The Federal Reserve Board expands the TAF, announcing an increase in the size of the 84-day maturity auction to $75 billion and two forward TAF auctions totaling $150 billion to provide maturity auction to $75 billion and two forward TAF auctions totaling $150 billion to provide short-term (one- to two-week) TAF credit over year-end.

September 29, 2008 | Treasury Department Press Release
The US Treasury Department opens its Temporary Guarantee Program for Money Market Funds [see note for September 19]. The temporary guarantee program provides coverage to shareholders for amounts that they held in participating money market funds as of the close of business on September 19, 2008.

September 29, 2008 | FDIC Press Release
The FDIC announces that Citigroup will purchase the banking operations of Wachovia Corporation. The FDIC agrees to enter into a loss-sharing arrangement with Citigroup on a $312 billion pool of loans, with Citigroup absorbing the first $42 billion of losses and the FDIC absorbing losses beyond that. In return, Citigroup would grant the FDIC $12 billion in preferred stock and warrants.

September 29, 2008 | Treasury Department Press Release
The US House of Representatives rejects legislation submitted by the Treasury Department requesting authority to purchase troubled assets from financial institutions [see note for September 20].

October 3, 2008 | Federal Reserve Press Release
Wells Fargo announces a competing proposal to purchase Wachovia Corporation that does not require assistance from the FDIC.

October 3, 2008 | H.R. 1424 | Public Law 110-343
Congress passes and President Bush signs into law the Emergency Economic Stabilization Act of 2008 (Public Law 110-343), which establishes the $700 billion Troubled Asset Relief Program (TARP).

October 6, 2008 | Federal Reserve Press Release
The Federal Reserve Board announce that the Fed will pay interest on depository institutions' required and excess reserve balances at an average of the federal funds target rate less 10 basis points on required reserves and less 75 basis points on excess reserves.

October 7, 2008 | Federal Reserve Press Release
The Federal Reserve Board announces the creation of the Commercial Paper Funding Facility (CPFF), which will provide a liquidity backstop to US issuers of commercial

paper through a special purpose vehicle that will purchase three-month unsecured and asset-backed commercial paper directly from eligible issuers.

October 7, 2008 | FDIC Press Release
The FDIC announces an increase in deposit insurance coverage to $250,000 per depositor as authorized by the Emergency Economic Stabilization Act of 2008.

October 8, 2008 | Federal Reserve Press Release
The Federal Reserve Board authorizes the Federal Reserve Bank of New York to borrow up to $37.8 billion in investment-grade, fixed-income securities from American International Group (AIG) in return for cash collateral.

October 8, 2008 | Federal Reserve Press Release
The FOMC votes to reduce its target for the federal funds rate 50 basis points to 1.50 percent. The Federal Reserve Board votes to reduce the primary credit rate 50 basis points to 1.75 percent.

October 12, 2008 | Federal Reserve Press Release
The Federal Reserve Board announces its approval of an application by Wells Fargo & Co. to acquire Wachovia Corporation.

October 13, 2008 | Federal Reserve Press Release
The FOMC increases existing swap lines with foreign central banks. The Bank of England, European Central Bank, and Swiss National Bank announce that they will conduct tenders of US dollar funding at 7-, 28-, and 84-day maturities at fixed interest rates.

October 14, 2008 | Federal Reserve Press Release
The Federal Reserve announces additional details of the Commercial Paper Funding Facility (CPFF).

October 14, 2008 | Federal Reserve Press Release
The FOMC increases its swap line with the Bank of Japan.

October 14, 2008 | Treasury Department TARP Press Release | Additional Information
US Treasury Department announces the Troubled Asset Relief Program (TARP) that will purchase capital in financial institutions under the authority of the Emergency Economic Stabilization Act of 2008. The US Treasury will make available $250 billion of capital to U.S. financial institutions. This facility will allow banking organizations to apply for a preferred stock investment by the US Treasury. Nine large financial organizations announce their intention to subscribe to the facility in an aggregate amount of $125 billion.

October 14, 2008 | FDIC TLGP Press Release
The FDIC creates a new Temporary Liquidity Guarantee Program to guarantee the senior debt of all FDIC-insured institutions and their holding companies, as well as deposits in non-interest-bearing deposit transaction through June 30, 2009.

October 21, 2008 | Federal Reserve Press Release

The Federal Reserve Board announces creation of the Money Market Investor Funding Facility (MMIFF). Under the facility, the Federal Reserve Bank of New York provides senior secured funding to a series of special purpose vehicles to facilitate the purchase of assets from eligible investors, such as US money market mutual funds. Among the assets the facility will purchase are US dollar-denominated certificates of deposit and commercial paper issued by highly rated financial institutions with a maturity of 90 days or less.

October 22, 2008 | Federal Reserve Press Release

The Federal Reserve Board announces that it will alter the formula used to determine the interest
rate paid to depository institutions on excess reserve balances. The new rate will be set equal to the lowest FOMC target rate in effect during the reserve maintenance period less 35 basis points.

October 24, 2008 | PNC Press Release
PNC Financial Services Group Inc. purchases National City Corporation, creating the fifth largest US bank.

October 28, 2008 | Treasury Department CPP Transaction Report
The US Treasury Department purchases a total of $125 billion in preferred stock in nine U.S. banks under the Capital Purchase Program.

October 28, 2008 | Federal Reserve Press Release
The FOMC and Reserve Bank of New Zealand establish a $15 billion swap line.

October 29, 2008 | Federal Reserve Press Release
The FOMC votes to reduce its target for the federal funds rate 50 basis points to 1.00 percent. The Federal Reserve Board reduces the primary credit rate 50 basis points to 1.25 percent.

October 29, 2008 | Federal Reserve Press Release
The FOMC also establishes swap lines with the Banco Central do Brasil, Banco de Mexico, Bank of Korea, and the Monetary Authority of Singapore for up to $30 billion each.

October 29, 2008 | IMF Press Release
The International Monetary Fund (IMF) announces the creation of a short-term liquidity facility for market-access countries.

November 5, 2008 | Federal Reserve Press Release
The Federal Reserve Board announces that it will alter the formula used to determine the interest rate paid to depository institutions on required and excess reserve balances. The rate on required reserves will be set equal to the average target federal funds rate over the reserve maintenance
period. The rate on excess balances will be set equal to the lowest FOMC target rate in effect period. The rate on excess balances will be set equal to the lowest FOMC target rate in effect during the reserve maintenance period.

November 10, 2008 | Federal Reserve Press Release
The Federal Reserve Board approves the applications of American Express and American Express Travel Related Services to become bank holding companies.

November 10, 2008 | Federal Reserve Press Release | Treasury Department Press Release
The Federal Reserve Board and the US Treasury Department announce a restructuring of the government's financial support of AIG. The Treasury will purchase $40 billion of AIG preferred shares under the TARP program, a portion of which will be used to reduce the Federal Reserve's loan to AIG from $85 billion to $60 billion. The terms of the loan are modified to reduce the interest rate to the three-month LIBOR plus 300 basis points and lengthen the term of the loan from two to five years. The Federal Reserve Board also authorizes the Federal Reserve Bank of New York to establish two new lending facilities for AIG: The Residential Mortgage- Backed Securities Facility will lend up to $22.5 billion to a newly formed limited liability company (LLC) to purchase residential MBS from AIG; the Collateralized Debt Obligations Facility will lend up to $30 billion to a newly formed LLC to purchase CDOs from AIG (Maiden Lane III LLC).

November 11, 2008 | Treasury Department Press Release
The US Treasury Department announces a new streamlined loan modification program with cooperation from the Federal Housing Finance Agency (FHFA), Department of Housing and Urban Development, and the HOPE NOW alliance.

November 12, 2008 | Treasury Department Press Release
US Treasury Secretary Paulson formally announces that the Treasury has decided not to use TARP funds to purchase illiquid mortgage-related assets from financial institutions.

November 14, 2008 | Treasury Department CPP Transaction Report
The US Treasury Department purchases a total of $33.5 billion in preferred stock in 21 US banks under the Capital Purchase Program.

November 17, 2008 | Lincoln National Press Release | Hartford Press Release | Genworth Press Release
Three large US life insurance companies seek TARP funding: Lincoln National, Hartford Financial Services Group, and Genworth Financial announce their intentions to purchase lenders/depositories and thus qualify as savings and loan companies to access TARP funding.

November 18, 2008 | Senate Hearing
Executives of Ford, General Motors, and Chrysler testify before Congress, requesting access to the TARP for federal loans.

November 20, 2008 | Fannie Mae Press Release | Freddie Mac Press Release
Fannie Mae and Freddie Mac announce that they will suspend mortgage foreclosures until January 2009.

November 21, 2008 | Treasury Department Press Release
The US Treasury Department announces that it will help liquidate The Reserve Fund's US Government Fund. The Treasury agrees to serve as a buyer of last resort for the fund's securities to ensure the orderly liquidation of the fund.

November 21, 2008 | Treasury Department CPP Transaction Report
The US Treasury Department purchases a total of $3 billion in preferred stock in 23 US banks under the Capital Purchase Program.

November 23, 2008 | Federal Reserve Press Release | Summary of Terms
The US Treasury Department, Federal Reserve Board, and FDIC jointly announce an agreement with Citigroup to provide a package of guarantees, liquidity access, and capital. Citigroup will issue preferred shares to the Treasury and FDIC in exchange for protection against losses on a $306 billion pool of commercial and residential securities held by Citigroup. The Federal Reserve will backstop residual risk in the asset pool through a non-recourse loan. In addition, the Treasury will invest an additional $20 billion in Citigroup from the TARP.

November 25, 2008 | Federal Reserve Press Release
The Federal Reserve Board announces the creation of the Term Asset-Backed Securities Lending Facility (TALF), under which the Federal Reserve Bank of New York will lend up to $200 billion on a non-recourse basis to holders of AAA-rated asset-backed securities and recently originated consumer and small business loans. The US Treasury will provide $20 billion of TARP money for credit protection.

November 25, 2008 | Federal Reserve Press Release
The Federal Reserve Board announces a new program to purchase direct obligations of housing related government-sponsored enterprises (GSEs)—Fannie Mae, Freddie Mac and Federal Home Loan Banks—and MBS backed by the GSEs. Purchases of up to $100 billion in GSE direct obligations will be conducted as auctions among Federal Reserve

primary dealers. Purchases of up to $500 billion in MBS will be conducted by asset managers.

November 26, 2008 | Federal Reserve Press Release
The Federal Reserve Board announces approval of the notice of Bank of America Corporation to acquire Merrill Lynch and Company.

December 2, 2008 | Federal Reserve Press Release
The Federal Reserve Board announces that it will extend three liquidity facilities, the Primary Dealer Credit Facility (PDCF), the Asset-Backed Commercial Paper Money Market Fund Liquidity Facility (AMLF), and the Term Securities Lending Facility (TSLF) through April 30, 2009.

December 3, 2008 | SEC Press Release
The SEC approves measures to increase transparency and accountability at credit rating agencies and thereby ensure that firms provide more meaningful ratings and greater disclosure to investors.

December 5, 2008 | Treasury Department CPP Transaction Report
The US Treasury Department purchases a total of $4 billion in preferred stock in 35 US banks under the Capital Purchase Program.

December 10, 2008 | FDIC Press Release
The FDIC reiterates the guarantee of federal deposit insurance in the event of a bank failure.

December 11, 2008 | NBER Press Release
The Business Cycle Dating Committee of the National Bureau of Economic Research announces that a peak in US economic activity occurred in December 2007 and that the economy has since been in a recession.

December 12, 2008 | Treasury Department CPP Transaction Report
The US Treasury Department purchases a total of $6.25 billion in preferred stock in 28 US banks under the Capital Purchase Program.

December 15, 2008 | Federal Reserve Press Release
The Federal Reserve Board announces that it has approved the application of PNC Financial Services to acquire National City Corporation.

December 16, 2008 | Federal Reserve Press Release
The FOMC votes to establish a target range for the effective federal funds rate of 0 to 0.25 percent. The Federal Reserve Board votes to reduce the primary credit rate 75 basis points to 0.50 percent. The Federal Reserve Board also establishes the interest rates on required reserve balances and excess balances at 0.25 percent for reserve maintenance periods beginning December 18, 2008.

December 19, 2008 | Treasury Department Press Release | General Motors Term Sheet | Chrysler Term Sheet
The US Treasury Department authorizes loans of up to $13.4 billion for General Motors and $4.0 billion for Chrysler from the TARP.

December 19, 2008 | Federal Reserve Press Release
The Federal Reserve Board announces revised terms and conditions of the Term Asset-Backed Securities Loan Facility (TALF). Among the revisions are an extension of TALF loans from maturities of one year to three years and an expansion of eligible ABS collateral.

December 19, 2008 | Treasury Department CPP Transaction Report
The US Treasury Department purchases a total of $27.9 billion in preferred stock in 49 US banks under the Capital Purchase Program.

December 22, 2008 | Federal Reserve Press Release
The Federal Reserve Board approves the application of CIT Group Inc., an $81 billion financing company, to become a bank holding company. The Board cites "unusual and exigent circumstances affecting the financial markets" for expeditious action on CIT Group's application.

December 23, 2008 | Treasury Department CPP Transaction Report
The US Treasury Department purchases a total of $15.1 billion in preferred stock from 43 US banks under the Capital Purchase Program.

December 24, 2008 | Federal Reserve Press Release
The Federal Reserve Board approves the applications of GMAC LLC and IB Finance Holding Company, LLC (IBFHC) to become bank holding companies, on conversion of GMAC Bank, a $33 billion Utah industrial loan company, to a commercial bank. GMAC Bank is a direct subsidiary of IBFHC and an indirect subsidiary of GMAC LLC, a $211 billion company. The Board cites "unusual and exigent circumstances affecting the financial markets" for expeditious action on these applications. As part of the agreement, General Motors will reduce its ownership interest in GMAC to less than 10 percent.

December 29, 2008 | Treasury Department Press Release
The US Treasury Department announces that it will purchase $5 billion in equity from GMAC as part of its program to assist the domestic automotive industry. The Treasury also agrees to lend up to $1 billion to General Motors "so that GM can participate in a rights offering at GMAC in support of GMAC's reorganization as a bank holding company." This commitment is in addition to the support announced on December 19, 2008.

December 30, 2008 | Federal Reserve Press Release
The Federal Reserve Board announces that it expects to begin to purchase mortgage-backed

securities backed by Fannie Mae, Freddie Mac and Ginnie Mae under a previously announced program in early January 2009 (see November 25, 2008).

December 30, 2008 | SEC Press Release

The US Securities and Exchange Commission (SEC) releases a report that recommends against the suspension of fair value accounting standards. The report was mandated by the Emergency Economic Stabilization Act of 2008 (EESA).

December 31, 2008 | Treasury Department CPP Transaction Report
The US Treasury Department purchases a total of $1.91 billion in preferred stock from seven US banks under the Capital Purchase Program.

January 5, 2009 | Federal Reserve Bank of New York Press Release
The Federal Reserve Bank of New York begins purchasing fixed-rate mortgage-backed securities guaranteed by Fannie Mae, Freddie Mac and Ginnie Mae under a program first announced on November 25, 2008.

January 7, 2009 | Federal Reserve Press Release
The Federal Reserve Board announces two changes to the Money Market Investor Funding Facility (MMIFF) that 1) expand the set of institutions eligible to participate in the MMIFF and 2) reduce the minimum yield on assets eligible to be sold to the MMIFF.

January 8, 2009 | Moody's Special Comment on FHLB
Moody's Investor Services issues a report suggesting that the Federal Home Loan Banks are currently facing the potential for significant accounting write-downs on their $76.2 billion private-label MBS securities portfolio. According to Moody's, only four of 12 Banks' capital ratios would remain above regulatory minimums under a worst-case scenario.

January 9, 2009 | Congressional Oversight Panel Press Release
The Congressional Oversight Panel issues its second monthly report on the expenditure of the Troubled Asset Relief Program (TARP).

January 9, 2009 | Treasury Department CPP Transaction Report
The US Treasury Department purchases a total of $4.8 billion in preferred stock from 43 US banks under the Capital Purchase Program.

January 12, 2009 | FDIC Press Release
The FDIC issues a letter to FDIC-supervised institutions calling on them to implement a process to monitor their use of capital injections, liquidity support and/or financing guarantees obtained through Treasury, FDIC, and Federal Reserve financial stability programs.

January 12, 2009 | White House Press Release | More Information

At the request of President-Elect Obama, President Bush submits a request to Congress for the remaining $350 billion in TARP funding for use by the incoming administration.

January 13, 2009 | Federal Home Loan Bank of Seattle Press Release
The Federal Home Loan Bank of Seattle reports that it will likely report a risk-based capital deficiency and suspend its dividend because of a decline in the market value of its mortgage-backed securities portfolio. The move follows a similar announcement on January 8 by the Federal Home Loan Bank of San Francisco.

January 16, 2009 | Treasury Department CPP Transaction Report
The US Treasury Department purchases a total of $1.4 billion in preferred stock from 39 US banks under the Capital Purchase Program.

January 16, 2009 | Federal Reserve Press Release | Term Sheet
The US Treasury Department, Federal Reserve, and FDIC announce a package of guarantees, liquidity access, and capital for Bank of America. The US Treasury and the FDIC will enter a loss-sharing arrangement with Bank of America on a $118 billion portfolio of loans, securities, and other assets in exchange for preferred shares. In addition, and if necessary, the Federal Reserve will provide a non-recourse loan to back-stop residual risk in the portfolio. Separately, the US Treasury will invest $20 billion in Bank of America from the TARP in exchange for preferred stock.

January 16, 2009 | Treasury Department Press Release
The US Treasury Department, Federal Reserve and FDIC finalize terms of their guarantee agreement with Citigroup. (See announcement on November 23, 2008.)

January 16, 2009 | Treasury Department Press Release
The US Treasury Department announces that it will lend $1.5 billion from the TARP to a special purpose entity created by Chrysler Financial to finance the extension of new consumer auto loans.

January 23, 2009 | Treasury Department CPP Transaction Report
The US Treasury Department purchases a total of $326 million in preferred stock from 23 US banks under the Capital Purchase Program.

January 28, 2009 | NCUA Press Release
The National Credit Union Administration (NCUA) Board announces that the NCUA will guarantee uninsured shares at all corporate credit unions through February 2009 and establish a voluntary guarantee program for uninsured shares of credit unions through December 2010. The Board also approves a $1 billion capital purchase in US Central Corporate Federal Credit Union. Corporate credit unions provide financing, check clearing, and other services to retail credit unions.

January 30, 2009 | Federal Reserve Press Release
The Board of Governors announces a policy to avoid preventable foreclosures on certain residential mortgage assets held, controlled or owned by a Federal Reserve Bank. The policy was developed pursuant to section 110 of the Emergency Economic Stabilization Act.

January 30, 2009 | Treasury Department CPP Transaction Report
The US Treasury Department purchases a total of $1.15 billion in preferred stock from 42 US banks under the Capital Purchase Program.

February 3, 2009 | Federal Reserve Press Release
The Federal Reserve announces the extension, through October 30, 2009, of the existing liquidity programs scheduled to expire on April 30, 2009. The Board of Governors and the FOMC note "continuing substantial strains in many financial markets." In addition, the swap lines between the Federal Reserve and other central banks are also extended to October 30, 2009. The expiration date for the TALF remains December 31, 2009, and the TAF does not have an expiration date.

February 6, 2009 | Federal Reserve Press Release
The Federal Reserve Board releases additional terms and conditions of the Term Asset-Backed Securities Loan Facility (TALF). Under the TALF, the Federal Reserve Bank of New York will lend up to $200 billion to eligible owners of certain AAA-rated asset-backed securities backed by newly and recently originated auto loans, credit card loans, student loans and SBA-guaranteed small business loans.

February 6, 2009 | Treasury Department CPP Transaction Report
The US Treasury Department purchases a total of $238.5 million in preferred stock from 28 US banks under the Capital Purchase Program.

February 6, 2009 | Special Inspector General TARP
The Office of the Special Inspector General for the Troubled Asset Relief Program issues its quarterly report to Congress on the operation of the Troubled Asset Relief Program.

February 10, 2009 | Treasury Department Press Release | Fact Sheet
US Treasury Secretary Timothy Geithner announces a Financial Stability Plan involving Treasury purchases of convertible preferred stock in eligible banks, the creation of a Public-Private Investment Fund to acquire troubled loans and other assets from financial institutions, expansion of the Federal Reserve's Term Asset-Backed Securities Loan Facility (TALF), and new initiatives to stem residential mortgage foreclosures and to support small business lending.

February 10, 2009 | Federal Reserve Press Release
The Federal Reserve Board announces that is prepared to expand the Term Asset-Backed Securities Loan Facility (TALF) to as much as $1 trillion and broaden the eligible collateral to include AAA-rated commercial mortgage-backed securities, private-label residential mortgage-backed securities, and other asset-backed securities. An expansion

of the TALF would be supported by $100 billion from the Troubled Asset Relief Program (TARP). The Federal Reserve Board will announce the date that the TALF will commence operations later this month.

February 13, 2009 | Treasury Department CPP Transaction Report
The US Treasury Department purchases a total of $429 million in preferred stock from 29 US banks under the Capital Purchase Program.

February 17, 2009 | Treasury Department Press Release
The US Treasury Department releases its first monthly survey of bank lending by the top 20 recipients of government investment through the Capital Purchase Program. The survey found that banks continued to originate, refinance and renew loans from the beginning of the program in October through December 2008.

February 17, 2009 | American Recovery and Reinvestment Act of 2009
President Obama signs into law the "American Recovery and Reinvestment Act of 2009", which includes a variety of spending measures and tax cuts intended to promote economic recovery.

February 18, 2009 | Executive Summary
President Obama announces The Homeowner Affordability and Stability Plan. The plan includes a program to permit the refinancing of conforming home mortgages owned or guaranteed by Fannie Mae or Freddie Mac that currently exceed 80 percent of the value of the underlying home. The plan also creates a $75 billion Homeowner Stability Initiative to modify the terms of eligible home loans to reduce monthly loan payments. In addition, the US Treasury Department will increase its preferred stock purchase agreements with Fannie Mae and Freddie Mac to $200 billion, and increase the limits on the size of Fannie Mae and Freddie Mac's portfolios to $900 billion.

February 23, 2009 | Federal Reserve Press Release
The US Treasury Department, Federal Deposit Insurance Corporation, Office of the Comptroller of the Currency, Office of Thrift Supervision, and the Federal Reserve Board issue a joint statement that the US government stands firmly behind the banking system, and that the government will ensure that banks have the capital and liquidity they need to provide the credit necessary to restore economic growth. Further, the agencies reiterate their determination to preserve the stability of systemically important financial institutions.

February 24, 2009 | Treasury Department CPP Transaction Report
The US Treasury Department purchases a total of $365.4 million in preferred stock from 23 US banks under the Capital Purchase Program.

February 25, 2009 | Federal Reserve Press Release
The Federal Reserve Board, Federal Deposit Insurance Corporation, Office of the Comptroller of the Currency and Office of Thrift Supervision announce that they will

conduct forward-looking economic assessments or "stress tests" of eligible US bank holding companies with assets
exceeding $100 billion. Supervisors will work with the firms to estimate the range of possible future losses and the resources to absorb such losses over a two-year period.The assessment process is expected to be completed by the end of April 2009.

February 26, 2009 | FDIC Quarterly Banking Profile
The FDIC announces that the number of "problem banks" increased from 171 institutions with $116 billion of assets at the end of the third quarter of 2008, to 252 insured institutions with $159 billion in assets at the end of fourth quarter of 2008. The FDIC also announces that there were 25 bank failures and five assistance transactions in 2008, which was the largest annual number since 1993.

February 26, 2009 | Fannie Mae Press Release
Fannie Mae reports a loss of $25.2 billion in the fourth quarter of 2008, and a full year 2008 loss of $58.7 billion. Fannie Mae also reports that on February 25, 2009, the Federal Housing Finance Agency submitted a request for $15.2 billion from the US Treasury Department under the terms of the Senior Preferred Stock Purchase Agreement in order to eliminate Fannie Mae's net worth deficit as of December 31, 2008.

February 27, 2009 | Treasury Department Press Release
The US Treasury Department announces its willingness to convert up to $25 billion of Citigroup preferred stock issued under the Capital Purchase Program into common equity. The conversion is contingent on the willingness of private investors to convert a similar amount of preferred shares into common equity. Remaining US Treasury and FDIC preferred shares issued under the Targeted Investment Program and Asset Guarantee Program would be converted into a trust preferred security of greater structural seniority that would carry the same 8 percent cash dividend rate as the existing issue.

February 27, 2009 | FDIC Press Release
The Federal Deposit Insurance Corporation (FDIC) announces changes in its risk-based assessment system and a 20 basis point emergency special assessment on insured depository institutions to be collected on September 30, 2009.

February 27, 2009 | Treasury Department CPP Transaction Report
The US Treasury Department purchases a total of $394.9 million in preferred stock from 28 US banks under the Capital Purchase Program.

March 2, 2009 | AIG Press Release | Federal Reserve Press Release | Treasury Department
Press Release
The US Treasury Department and Federal Reserve Board announce a restructuring of the government's assistance to American International Group (AIG). Under the restructuring, AIG will receive as much as $30 billion of additional capital from the Troubled Asset Relief Program (TARP). In addition, the US Treasury Department will exchange its existing $40 billion cumulative preferred shares in AIG for new preferred shares with

revised terms that more closely resemble common equity. Finally, AIG's revolving credit facility with the Federal Reserve Bank of New York will be reduced from $60 billion to no less than $25 billion and the terms will be modified. In exchange, the Federal Reserve will receive preferred interests in two special purpose vehicles created to hold the outstanding common stock of two subsidiaries of AIG: American Life Insurance Company and American International Assurance Company Ltd. Separately, AIG reports a fourth quarter 2008 loss of $61.7 billion, and a loss of $99.3 billion for all of 2008.

March 3, 2009 | Federal Reserve Press Release
The US Treasury Department and the Federal Reserve Board announce the launch of the Term Asset-Backed Securities Loan Facility (TALF). Under the program, the Federal Reserve Bank of New York will lend up to $200 billion to eligible owners of certain AAA-rated asset-backed securities backed by newly and recently originated auto loans, credit card loans, student loans and small business loans that are guaranteed by the Small Business Administration. The Federal Reserve and Treasury expect to include asset-backed securities backed by other type of loans in future monthly fundings. Subscriptions for funding in March will be accepted on March 17, 2009. Securitizations will be funded by the program on March 25, 2009. The program will hold monthly fundings through December 2009 or longer if extended by the Federal Reserve Board.

March 4, 2009 | Treasury Department Press Release
The US Treasury Department announces guidelines to enable servicers to begin modifications of eligible mortgages under the Homeowner Affordability and Stability Plan.

March 6, 2009 | Treasury Department CPP Transaction Report
The US Treasury Department purchases a total of $284.7 million in preferred stock from 22 US banks under the Capital Purchase Program.

March 11, 2009 | Federal Reserve Press Release
The Federal Reserve Board releases the minutes of its meetings from July 13, 2008 through December 16, 2008 concerning Federal Reserve liquidity facilities and other issues related to the financial turmoil.

March 11, 2009 | Freddie Mac Press Release
Freddie Mac announces that it had a net loss of $23.9 billion in the fourth quarter of 2008, and a net loss of $50.1 billion for 2008 as a whole. Further, Freddie Mac announces that its conservator has submitted a request to the US Treasury Department for an additional $30.8 billion in funding for the company under the Senior Preferred Stock Purchase Agreement with the Treasury.

March 13, 2009 | Treasury Department CPP Transaction Report
The US Treasury Department purchases a total of $1.45 billion in preferred stock from 19 US banks under the Capital Purchase Program.

March 17, 2009 | FDIC Press Release
The Federal Deposit Insurance Corporation (FDIC) decides to extend the debt guarantee portion of the Temporary Liquidity Guarantee Program (TLGP) from June 30, 2009 through October 31, 2009, and to impose a surcharge on debt issued with a maturity of one-year or more beginning in the second quarter of 2009 to gradually phase-out the program.

March 18, 2009 | Federal Reserve Press Release
The FOMC votes to maintain the target range for the effective federal funds at 0 to 0.25 percent. In addition, the FOMC decides to increase the size of the Federal Reserve's balance sheet by purchasing up to an additional $750 billion of agency mortgage-backed securities, bringing its total purchases of these securities to up to $1.25 trillion this year, and to increase its purchases of agency debt this year by up to $100 billion to a total of up to $200 billion. The FOMC also decides to purchase up to $300 billion of longer-term Treasury securities over the next six months to help improve conditions in private credit markets. Finally, the FOMC announces that it anticipates expanding the range of eligible collateral for the TALF (Term Asset-Backed Securities Loan Facility).

March 18, 2009 | Federal Reserve Bank of New York Press Release
The Federal Reserve Bank of New York releases more information on the Federal Reserve's plan to purchase Treasury securities. The Desk will concentrate its purchases in nominal maturities ranging from 2 to 10 years. The purchases will be conducted with the Federal Reserve's primary dealers through a series of competitive auctions and will occur two to three times a week. The Desk plans to hold the first purchase operation late next week.

March 19, 2009 | Treasury Department Press Release
The US Department of the Treasury announces an Auto Supplier Support Program that will provide up to $5 billion in financing to the automotive industry. The Supplier Support Program will provide selected suppliers with financial protection on monies ("receivables") they are owed by domestic auto companies and the opportunity to access immediate liquidity against those obligations. Receivables created with respect to goods shipped after March 19, 2009, will be eligible for the program. Any domestic auto company is eligible to participate in the program. Any U.S.-based supplier that ships to a participating auto manufacturer on qualifying commercial terms may be eligible to participate in the program.

March 19, 2009 | Federal Reserve Press Release
The Federal Reserve Board announces an expansion of the eligible collateral for loans extended by the Term Asset-Backed Securities Loan Facility (TALF) to include asset-backed securities backed by mortgage servicing advances, loans or leases related to business equipment, leases of vehicle fleets, and floorplan loans. The new categories of collateral will be eligible for the April TALF funding.

March 19, 2009 | Federal Reserve Bank of New York Press Release
The Federal Reserve Bank of New York releases the initial results of the first round of loan requests for funding from the Term Asset-Backed Securities Loan Facility (TALF). The amount of TALF loans requested at the March 17-19 operation was $4.7 billion.

March 19, 2009 | FDIC Press Release
The FDIC completes the sale of IndyMac Federal Bank to OneWest Bank. OneWest will assume all deposits of IndyMac, and the 33 branches of IndyMac will reopen as branches of OneWest on March 20. As of January 31, 2009, IndyMac had total assests of $23.5 billion and total deposits of $6.4 billion. IndyMac reported fourth quarter 2008 losses of $2.6 billion, and the total estimated loss to the Deposit Insurance Fund of the FDIC is $10.7 billion. The FDIC had been named conservator of IndyMac FSB on July 11, 2008.

March 20, 2009 | Treasury Department CPP Transaction Report
The US Treasury Department purchases a total of $80.8 million in preferred stock from 10 US banks under the Capital Purchase Program.

March 23, 2009 | Federal Reserve Press Release
The Federal Reserve and the US Treasury issue a joint statement on the appropriate roles of each during the current financial crisis and into the future, and on the steps necessary to ensure financial and monetary stability. The four points of agreement are 1) The Treasury and the Federal Reserve will continue to cooperate in improving the functioning of credit markets and fostering financial stability; 2) The Federal Reserve should avoid credit risk and credit allocation, which are the province of fiscal authorities; 3) The need to preserve monetary stability, and that actions by the Federal Reserve in the pursuit of financial stability must not constrain the exercise of monetary policy as needed to foster maximum sustainable employment and price stability; and 4) The need for a comprehensive resolution regime for systemically critical financial institutions. In addition, the Treasury will seek to remove the Maiden Lane facilities from the Federal Reserve's balance sheet.

March 23, 2009 | Treasury Department Press Release
The US Treasury Department announces details on the Public-Private Investment Program for Legacy Assets. The program will have two parts: a Legacy Loans Program and a Legacy Securities Program. The Legacy Loans Program will facilitate the creation of individual Public-Private Investment Funds which will purchase distressed loans that are currently held by banks. The US Treasury intends to provide 50 percent of the equity capital for each fund. The FDIC will provide oversight for the formation, funding, and operation of these funds, and guarantee the debt issued by the funds. Under the Legacy Securities Program, the US Treasury Department will approve up to five asset managers who will have the opportunity to raise private capital to acquire distressed securities currently held by banks. The US Treasury will provide 50 percent of the equity capital for each investment fund and will consider requests for loans to each fund. In addition, the investment funds would also be eligible for non-recourse loans from the Term Asset-Backed Securities Facility (TALF).

March 25, 2009 | Treasury Department Press Release | Draft Legislation
The US Treasury Department proposes legislation that would grant the US government authority to put certain financial institutions into conservatorship or receivership to avert systemic risks posed by the potential insolvency of a significant financial firm. The authority is modeled on the resolution authority that the FDIC has with respect to banks and that the Federal Housing Finance Agency has with regard to the GSEs. The authority would apply to non-bank financial institutions that have the potential to pose systemic risks to the economy but that are not currently subject to the resolution authority of the FDIC or the Federal Housing Finance Agency.

March 26, 2009 | Treasury Department Press Release
The US Treasury Department outlines a framework for comprehensive regulatory reform that focuses on containing systemic risks in the financial system. The framework calls for assigning responsibility over all systemically-important firms and critical payment and settlement systems to a single independent regulator. Further, it calls for higher standards on capital and risk management for systemically-important firms; for requiring all hedge funds above a certain size to register with a financial regulator; for a comprehensive framework of oversight, protection and disclosure for the over-the-counter derivatives market; for new requirements for money market funds; and for stronger resolution authority covering all financial institutions that pose systemic risks to the economy.

March 27, 2009 | Treasury Department CPP Transaction Report
The US Treasury Department purchases a total of $193 million in preferred stock from 14 US banks under the Capital Purchase Program.

March 31, 2009 | GAO Report: March 2009 Status of Efforts to Address Transparency and Accountability Issues (GAO-09-504)
The General Accounting Office (GAO) releases a report on the status of efforts to address transparency and accountability issues for the Troubled Asset Relief Program (TARP). The report provides information about the nature and purpose of TARP funding through March 27, 2009, the performance of the Treasury Department's Office of Financial Stability, and TARP performance indicators.

March 31, 2009 | Treasury Department Press Release
The US Treasury Department announces an extension of its temporary Money Market Funds Guarantee Program through September 18, 2009. This program will continue to provide coverage to shareholders up to the amount held in participating money market funds as of the close of business on September 19, 2008. The Program currently covers over $3 trillion of combined fund assets and was scheduled to end on April 30, 2009.

March 31, 2009
Four bank holding companies announced that they had redeemed all of the preferred shares that they had issued to the US Treasury under the Capital Purchase Program of the Troubled Asset Relief Program (TARP). The four banks are Bank of Marin Bancorp (Novato, CA), Iberiabank Corporation (Lafayette, LA), Old National Bancorp (Evansville, IN), and Signature Bank (New York, NY).

April 1, 2009 | Board of Governors' Letter to Congressional Oversight Panel | Response to Congressional Oversight Panel
Federal Reserve Chairman Bernanke and Federal Reserve Bank of New York President Dudley respond to questions from the Congressional Oversight Panel about the Term Asset-Backed Loan Facility (TALF), explaining in detail the rationale and operation of the TALF.

April 2, 2009 | FASB Press Release
The Financial Accounting Standards Board approves new guidance to ease the accounting of troubled assets held by banks and other financial companies. In particular, the Board provides new guidance on how to determine the fair value of assets for which there is no active market.

April 3, 2009 | Treasury Department CPP Transaction Report
The US Treasury purchases a total of $54.8 million in preferred stock from 10 US banks under the Capital Purchase Program.

April 6, 2009 | Federal Reserve Press Release
The Federal Reserve announces new reciprocal currency agreements (swap lines) with the Bank of England, the European Central Bank, the Bank of Japan and the Swiss National Bank that would enable the provision of foreign currency liquidity by the Federal Reserve to US financial institutions.

April 7, 2009 | Congressional Oversight Panel Press Release
The Congressional Oversight Panel releases its monthly report on the Troubled Asset Relief Program (TARP). This report, entitled "Assessing Treasury's Strategy: Six Months of TARP," provides information about expenditures and commitments to date of TARP funds, evaluates the Treasury Department's strategy for improving the condition and functioning of financial institutions and markets, and discusses potential policy alternatives.

April 9, 2009 | FASB Press Release
The Financial Accounting Standards Board issues three final Staff Positions intended to provide additional application guidance and enhance disclosures regarding fair value measurements and impairments of securities.

April 10, 2009 | Treasury Department CPP Transaction Report
The US Treasury purchases a total of $22.8 million in preferred stock from 5 US banks under the Capital Purchase Program.

April 17, 2009 | Treasury Department CPP Transaction Report
The US Treasury purchases a total of $40.9 million in preferred stock from 6 US banks under the Capital Purchase Program.

April 21, 2009 | Special Inspector General TARP

The Office of the Special Inspector General for the Troubled Asset Relief Program issues its quarterly report to Congress on the operation of the Troubled Asset Relief Program.

April 23, 2009 | Federal Reserve Press Release
The Federal Reserve publishes the annual financial statements for the combined Federal Reserve Banks, the 12 individual Federal Reserve Banks, the limited liability companies that were created in 2008 to respond to strains in the financial markets, and the Board of Governors for the years ended December 31, 2008 and 2007.

April 24, 2009 | Federal Reserve Press Release
The Federal Reserve Board publishes a white paper describing the process and methodologies employed by federal banking supervisory authorities in their forward looking assessment ("stress test") of large US bank holding companies.

April 24, 2009 | Treasury Department CPP Transaction Report
The US Treasury purchases a total of $121.8 million in preferred stock from 12 US banks under the Capital Purchase Program.

May 1, 2009 | Federal Reserve Press Release
The Federal Reserve Board announces that, starting in June, commercial mortgage-backed securities (CMBS) and securities backed by insurance premium finance loans will be eligible collateral under the Term Asset-Backed Securities Loan Facility (TALF). The Board also authorizes TALF loans with maturities of five years. Currently, all TALF loans have maturities of three years. TALF loans with five-year maturities will be available for the June funding to finance purchases of CMBS, ABS backed by student loans, and ABS backed by loans guaranteed by the Small Business Administration.

May 1, 2009 | Treasury Department CPP Transaction Report
The US Treasury purchases a total of $45.5 million in preferred stock from 7 US banks under the Capital Purchase Program.

May 7, 2009 | Federal Reserve Press Release
The Federal Reserve releases the results of the Supervisory Capital Assessment Program ("stress test") of the 19 largest US bank holding companies. The assessment finds that the 19 firms could lose $600 billion during 2009 and 2010 if the economy were to track the more adverse scenario considered in the program. The assessment also finds that 9 of the 19 firms already have adequate capital to maintain Tier 1 capital in excess of 6 percent of total assets and common equity capital in excess of 4 percent under the more adverse scenario. Ten firms would need to add $185 billion to their capital to maintain adequate buffers under the more adverse scenario. However, transactions and revenues since the end of 2008 have reduced to $75 billion the additional capital that these firms must raise in order to establish the capital buffer required under the program. A bank holding company needing to augment its capital buffers will be required to develop a detailed

plan to be approved by its primary supervisor within 30 days and to implement its plan to raise additional capital by early November 2009.

May 8, 2009 | Fannie Mae Press Release
Fannie Mae reports a loss of $23.2 billion for the first quarter of 2009. The Director of the Federal Housing Finance Agency (FHFA), which has been conservator of Fannie Mae since September 6, 2008, requests $19 billion from the US Treasury Department under the terms of the Senior Preferred Stock Purchase Agreement between Fannie Mae and the Treasury to eliminate the firm's net worth deficit. Separately, on May 6, 2009, the Treasury Department and the FHFA enter into an amendment to the Senior Preferred Stock Purchase Agreement to increase the Treasury's funding commitment to Fannie Mae to $200 billion from $100 billion, increase the allowed size of Fannie Mae's mortgage portfolio to $900 billion, and to increase the firm's allowable debt outstanding to $1,080 billion.

May 8, 2009 | Treasury Department CPP Transaction Report
The US Treasury purchases a total of $42 million in preferred stock from 7 US banks under the Capital Purchase Program.

May 12, 2009 | Freddie Mac Press Release
Freddie Mac reports a first quarter 2009 loss of $9.9 billion, and a net worth deficit of $6.0 billion as of March 31, 2009. The Director of the Federal Housing Finance Agency (FHFA) submits a request to the US Treasury .Department for funding in thê amount of $6.1 billion in his capacity as conservator of Freddie Mac. Further, on May 6, 2009, the Treasury Department and FHFA, acting on Freddie Mac's behalf as its conservator, entered into an amendment to the Purchase Agreement between the company and Treasury that increases the Treasury's funding commitment to the firm to $200 billion from $100 billion, increases the allowed size of Freddie Mac's mortgage-related investments portfolio by $50 billion to $900 billion, and increases the firm's allowable debt outstanding to $1,080 billion until December 31, 2010.

May 13, 2009 | Treasury Department Press Release
The US Treasury Department proposes amendments to the Commodity Exchange Act and securities laws to enhance government regulation of over-the-counter (OTC) derivatives markets. The proposed changes include requirements that all standardized OTC derivatives be cleared through regulated central counterparties, and that all OTC derivatives dealers and all other firms whose activities in those markets create large exposures to counterparties be subject to prudential supervision and regulation. In addition, the US Treasury Department proposes new recordkeeping and reporting requirements on all OTC derivatives, and increased authority for the Commodity Futures Trading Commission to regulate OTC derivatives trading.

May 15, 2009 | Treasury Department CPP Transaction Report
The US Treasury purchases a total of $107.6 million in preferred stock from 14 US banks under the Capital Purchase Program.

May 19, 2009 | Federal Reserve Press Release
The Federal Reserve Board announces that, starting in July, certain high-quality commercial mortgage-backed securities issued before January 1, 2009 ("legacy CMBS") will become eligible collateral under the Term Asset-Backed Securities Loan Facility (TALF). The objective of the expansion is to restart the market for legacy securities and, by doing so, stimulate the extension of new credit by helping to ease balance sheet pressures on banks and other financial institutions. Eligible CMBS must have a triple-A rating from at least two major rating services.

May 20, 2009 | FDIC Press Release
President Obama signs the Helping Families Save Their Homes Act of 2009, which temporarily raises FDIC deposit insurance coverage from $100,000 per depositor to $250,000 per depositor. The new coverage at FDIC-insured institutions will expire on January 1, 2014, when the amount will return to its standard level of $100,000 per depositor for all account categories except IRAs and other certain retirement accounts. This action supersedes the October 3, 2008 changes.

May 21, 2009 | FDIC Press Release
The Federal Deposit Insurance Corporation (FDIC) announces the approval of GMAC Financial Services to participate in the Temporary Liquidity Guarantee Program (TLGP). GMAC will be allowed to issue up to $7.4 billion in new FDIC-guaranteed debt.

May 21, 2009 | Standard and Poor's Press Release
Standard and Poor's Ratings Services lowers its outlook on the United Kingdom government debt from stable to negative because of the estimated fiscal cost of supporting the nation's banking system. S&P estimates that this cost could double the government's debt burden to about 100 percent of GDP by 2013.

May 22, 2009 | Federal Reserve Press Release
The Federal Reserve Board announces the adoption of a final rule that will allow bank holding companies to include in their Tier 1 capital without restriction senior perpetual preferred stock issued to the US Treasury Department under the Troubled Asset Relief Program (TARP).

May 22, 2009 | Treasury Department CPP Transaction Report
The US Treasury purchases a total of $108 million in preferred stock from 12 US banks under the Capital Purchase Program.

May 27, 2009 | FDIC Quarterly Banking Profile
The FDIC announces that the number of "problem banks" increased from 252 insured institutions with $159 billion in assets at the end of fourth quarter of 2008, to 305 institutions with $220 billion of assets at the end of the first quarter of 2009. The FDIC also announces that there were 21 bank failures in the first quarter of 2009, which is the largest number of failed institutions in a quarter since the first quarter of 1992.

May 29, 2009 | Treasury Department CPP Transaction Report
The US Treasury purchases a total of $89 million in preferred stock from 8 US banks under the Capital Purchase Program.

June 1, 2009 | GM Press Release
As part of a new restructuring agreement with the US Treasury and the governments of Canada and Ontario, General Motors Corporation and three domestic subsidiaries announce that they have filed for relief under Chapter 11 of the US Bankruptcy Code.

June 1, 2009 | Federal Reserve Press Release
The Federal Reserve Board announces the criteria it will use to evaluate redemption applications from the 19 bank holding companies that received US Treasury capital as part of the Supervisory Capital Assessment Program. An initial set of redemption approvals are expected to be announced during the week of June 8.

June 3, 2009 | FDIC Press Release
The FDIC announces that the previously planned sale of impaired bank assets under the Legacy Loans Program (LLP) will be postponed. According to Chairman Bair: "Banks have been able to raise capital without having to sell bad assets through the LLP, which reflects renewed investor confidence in our banking system."

June 5, 2009 | Treasury Department CPP Transaction Report
The US Treasury purchases a total of $40 million in preferred stock from 3 US bank under the Capital Purchase Program.

June 9, 2009 | Treasury Department Press Release
The US Treasury Department announces that 10 of the largest US financial institutions participating in the Capital Purchase Program have met the requirements for repayment established by the primary federal banking supervisors. If these firms choose to repay the capital acquired through the program, the Treasury will receive up to $68 billion in repayment proceeds.

June 10, 2009 | Federal Reserve Press Release | Credit and Liquidity Report
The Federal Reserve issues the first of an ongoing series of monthly reports on its credit and lending facilities. The report provides information on borrowing patterns and collateral for many of the Federal Reserve's credit and liquidity programs, including the number of borrowers and borrowing amounts by type of institution, collateral by type and credit rating, and data on the concentration of borrowing. The report also includes information on liquidity swap usage by country, quarterly income for important classes of Federal Reserve assets, and asset distribution and other information on the limited liability companies created to avert the disorderly failures of Bear Stearns and American International Group (AIG).

June 12, 2009 | Federal Reserve Press Release
The Federal Reserve announces that it is reviewing regulatory capital requirements for banking organizations in response to a decision by the Financial Accounting Standards

Board to address weaknesses in accounting and disclosure standards for off-balance sheet vehicles.

June 12, 2009 | Treasury Department CPP Transaction Report
The US Treasury purchases a total of $39 million in preferred stock from 7 US Banks under the Capital Purchase Program.

June 17, 2009 | US Treasury Department Regulatory Reform Proposal
The US Treasury Department releases a proposal for reforming the financial regulatory system. The proposal calls for the creation of a Financial Services Oversight Council and for new authority for the Federal Reserve to supervise all firms that pose a threat to financial stability, including firms that do not own a bank.

June 19, 2009 | Treasury Department CPP Transaction Report
The US Treasury purchases a total of $84.7 million in preferred stock from 10 US banks under the Capital Purchase Program.

June 24, 2009 | SEC Press Release
The Securities and Exchange Commission proposes rule amendments designed to strengthen the regulatory framework for money market funds. The proposed rules are intended to reduce the risk in money market funds by introducing liquidity requirements, shortening the average maturity limits, and increasing the requirements for credit quality. In addition, the proposals would require the monthly reporting of portfolio holdings and will allow suspension of redemptions if a fund "breaks the buck."

June 24, 2009 | Federal Reserve Press Release
The Federal Reserve announces extensions of and modifications to a number of its liquidity programs. The expiration date of the Asset-Backed Commercial Paper Money Market Mutual Fund Liquidity Facility (AMLF), the Commercial Paper Funding Facility (CPFF), the Primary Dealer Credit Facility (PDCF), and the Term Securities Lending Facility (TSLF) is extended through February 1, 2010. The expiration date of the Term Asset-Backed Securities Loan Facility (TALF) remains set at December 31, 2009. In addition, the temporary reciprocal currency arrangements (swap lines) between the Federal Reserve and other central banks have been extended to February 1, 2010. The Federal Reserve also announces that the amounts auctioned at the biweekly auctions of Term Auction Facility (TAF) funds will be reduced from $150 billion to $125 billion, effective with the auction to be held on July 13, 2009.

June 25, 2009 | AIG Press Release
American International Group (AIG) announces that it has entered into an agreement with the Federal Reserve Bank of New York to reduce the debt AIG owes the Federal Reserve Bank of New York by $25 billion. The Federal Reserve Bank of New York will receive preferred interests of $16 billion and $9 billion, respectively, in two new special purpose vehicles holding the equity of AIG subsidiaries American International Assurance Company and American Life Insurance Company.

June 26, 2009 | Treasury Department Press Release
The US Treasury announces its policy regarding the disposition of warrants acquired under the Capital Purchase Program. For publicly traded companies, the Treasury received warrants to purchase common shares of stock; these warrants have not been exercised. The Treasury's policy allows banks to repurchase warrants following a multi-step process to determine fair market value.

June 30, 2009 | Treasury Department Press Release
The US Treasury proposes a bill to Congress that would create a new Consumer Financial Protection Agency. The bill would transfer all current consumer protection functions of the Federal Reserve System, Comptroller of the Currency, Office of Thrift Supervision, FDIC, FTC, and the National Credit Union Administration to the new agency. In addition, Treasury proposes amendments to the Federal Trade Commission Act with regards to coordination with the proposed Consumer Financial Protection Agency.

July 8, 2009 | Treasury Department Press Release
The US Treasury Department, Federal Reserve and the FDIC announce the details of the Legacy Securities Public-Private Investment Program (PPIP). Under this program, the US Treasury will invest up to $30 billion with private sector fund managers and private investors for the purpose of purchasing legacy securities. The Legacy Securities PPIP will participate in the market for commercial mortgage-backed securities and non-agency residential mortgage-backed securities. To qualify for purchase, these securities must have been issued prior to 2009 and have originally been rated AAA (or an equivalent rating by two or more nationally recognized statistical rating organizations) without ratings enhancement and must be secured directly by the actual mortgage loans, leases, or other assets ("Eligible Assets"). The US Treasury pre-qualified nine firms to participate as fund managers. The fund managers will be required to raise at least $500 million of capital from private investors; the equity capital will be matched by US Treasury. In addition, the fund manager must also invest a minimum of $20 million of firm capital. Upon raising this private capital the fund managers can begin purchasing Eligible Assets.

July 10, 2009 | Congressional Oversight Panel Press Release
The Congressional Oversight Panel for the Troubled Asset Relief Program releases its July report, which examines several issues raised by the repayment of TARP funds by institutions that have received TARP assistance.

July 15, 2009 | House Democrats Press Release | House Republicans Press Release | Public Law
Congress announces the appointment of members to the Financial Crisis Inquiry Commission. The Commission was established by the Fraud Enforcement and Recovery Act of 2009 (Public Law 111-21), which was enacted on May 20, 2009. The Commission is required to report its findings on the causes of the financial crisis to Congress by December 15, 2010.

July 21, 2009 | Special Inspector General TARP
The Office of the Special Inspector General for the Troubled Asset Relief Program issues its quarterly report to Congress on the operation of the Troubled Asset Relief Program.

July 21, 2009 | Federal Reserve Press Release
Chairman Ben Bernanke presents the second of the Federal Reserve's semi-annual Monetary Policy Report to the Congress. Chairman Bernanke testifies that "the extreme risk aversion of last fall has eased somewhat, and investors are returning to private credit markets."

July 23, 2009 | Federal Reserve Press Release
The Federal Reserve Board proposes significant changes to Regulation Z (Truth in Lending) intended to improve the disclosures consumers receive in connection with closed-end mortgages and home-equity lines of credit. Among other changes, the Board's proposal would improve the disclosure of the annual percentage rate on closed-end mortgages and require lenders to show consumers how much their monthly payments might increase for adjustable-rate mortgages. The proposal would also prohibit payments to a mortgage broker or loan officer that are based on a loan's interest rate or other terms, and prohibit lenders from steering consumers to transactions that are not in their interest in order to increase the lender's compensation.

July 23, 2009 | Citigroup Press Release
Citigroup announces that it completed a previously announced exchange offer with private investors of convertible preferred securities and a previously announced matching exchange offer with the US Government. Citigroup exchanged $12.5 billion in aggregate liquidation value of convertible preferred securities held by private holders for interim securities and warrants, and made a similar exchange of $12.5 billion in aggregate liquidation value of convertible preferred securities held by the US Government for interim securities and warrants. The interim securities will convert to common stock, subject to shareholder authorization of the increase in Citigroup's authorized common stock.

July 24, 2009 | Federal Reserve Press Release
The Federal Reserve announces that the amounts of Term Auction Facility (TAF) credit offered at each of the two auctions in August will be reduced to $100 billion from $125 billion in July. The reduction is consistent with the expectation that TAF auction amounts would be reduced gradually further in coming months if market conditions continue to improve.

July 26, 2009 | Citigroup Press Release
Citigroup announces the preliminary results of its offers to exchange its publicly held convertible and non-convertible preferred and trust preferred securities for newly issued shares of its common stock. Citigroup also announces that it expects to complete a further exchange with the US Government of $12.5 billion in aggregate liquidation preference of Citigroup preferred stock, and that in aggregate, approximately $58 billion in aggregate

liquidation value of preferred and trust preferred securities will have been exchanged to common stock as a result of the completion of all the exchange offers.

August 6, 2009 | Fannie Mae Press Release
Fannie Mae reports a loss of $14.8 billion in the second quarter of 2009. The Director of the Federal Housing Finance Agency, which has been acting as Fannie Mae's conservator since September 6, 2008, requests $10.7 billion from the US Treasury Department under the terms of the senior preferred stock purchase agreement between Fannie Mae and the Treasury in order to eliminate the firm's net worth deficit. Under the agreement, the Treasury will have provided $45.9 billion of capital to Fannie Mae to cover net worth deficits through the second quarter of 2009.

August 17, 2009 | Federal Reserve Press Release
The Federal Reserve Board and the Treasury Department announce an extension to the Term Asset-Backed Securities Loan Facility (TALF). Eligible loans against newly issued asset-backed securities (ABS) and legacy commercial mortgage-backed securities (CMBS) can now be made through March 31, 2010. Because new CMBS deals can take a significant amount of time to arrange, TALF lending against newly issued CMBS was approved through June 30, 2010. The previously-announced deadline for TALF loans was December 31, 2009. The Federal Reserve and the Treasury said they do not anticipate any further additions to the types of collateral that are eligible for the TALF.

August 25, 2009 | White House Press Release
President Obama nominates Ben S. Bernanke for a second term as Chairman of the Board of Governors of the Federal Reserve System.

August 27, 2009 | FDIC Press Release
The FDIC announces that the number of "problem banks" increased from 305 insured institutions with $220 billion in assets at the end of first quarter of 2009, to 416 institutions with $299.8 billion of assets at the end of the second quarter of 2009.

August 28, 2009 | Federal Reserve Press Release
The Federal Reserve announces that the amounts of Term Auction Facility (TAF) credit offered at each of the two auctions in September will be reduced to $75 billion from $100 billion in August. This follows on a reduction from $125 billion in July. The reduction is consistent with expectations that the TAF auction amounts will continue to decrease as market conditions improve.

September 9, 2009 | FDIC Press Release
The FDIC Board adopts a Notice of Proposed Rulemaking (NPR) that reaffirms the expiration of the debt guarantee component of the Temporary Liquidity Guarantee Program (TLGP) on October 31st, 2009. Under the NPR, the Federal Deposit Insurance Corporation will seek comment on whether a temporary emergency facility should be left in place for six months after the expiration of the current program. There are two alternatives contemplated under the NPR. Under Alternative A, the DGP would expire as provided for by the FDIC's existing regulation on October 31st, 2009 with FDIC's

guarantee for such debt expiring no later than December 31, 2012. Under Alternative B, the Debt Guarantee Program will expire as provided for in the current regulation, however, the FDIC would establish a six-month emergency guarantee facility to be made available in emergency circumstances to insured depository institutions (IDSs) and certain other entities participating in the DGP upon application to the FDIC and with the approval of the Chairman, after consultation with the Board.

September 14, 2009 | Treasury Department Press Release
The US Treasury releases the report "The Next Phase of Government Financial Stabilization and Rehabilitation Policies." This report focuses on winding down those programs that were once deemed necessary to prevent systemic failure in the financial markets and the broader economy.

September 16, 2009 | FDIC Press Release
The Federal Deposit Insurance Corporation (FDIC) announces the signing of a bid confirmation letter with Residential Credit Solutions in a pilot sale of receivership assets under the Legacy Loans Program of the Public-Private Investment Program. The Public-Private Investment Program is being developed to help banks remove troubled assets from their balance sheets. The pilot sale was conducted to test the funding mechanism for the Legacy Loans Program.

September 18, 2009 | Treasury Department Press Release
The US Department of the Treasury announces the expiration of the Guarantee Program for Money Market Funds, which was implemented in the wake of the failure of Lehman Brothers in September 2008. The Program was initially established for a three-month period that could be extended up through September 18, 2009. Since its inception, the Treasury had no losses under the Program and earned approximately $1.2 billion in participation fees.

September 29, 2009 | FDIC Press Release
The Board of Directors of the Federal Deposit Insurance Corporation (FDIC) adopts a Notice of Proposed Rulemaking (NPR) that would require insured institutions to prepay their estimated quarterly risk-based assessments for the fourth quarter of 2009 and for all of 2010, 2011 and 2012. The FDIC estimates that the total prepaid assessments collected would be approximately $45 billion. The FDIC Board also votes to adopt a uniform three-basis point increase in assessment rates effective on January 1, 2011, and extend the restoration period from seven to eight years.

October 14, 2009
The Dow Jones Industrial Average closes above 10,000 for the first time since October 3, 2008.

October 21, 2009 | Special Inspector General TARP
The Office of the Special Inspector General for the Troubled Asset Relief Program issues its quarterly report to Congress on the operation of the Troubled Asset Relief Program.

October 22, 2009 | US Treasury Department Press Release
The Special Master for TARP Executive Compensation releases determinations on the compensation packages for the top 25 most highly paid executives at the seven firms that received exceptional TARP assistance (AIG, Citigroup, Bank of America, Chrysler, Chrysler Financial, GM, and GMAC).

October 22, 2009 | Federal Reserve Press Release
The Federal Reserve Board issues a proposal designed to ensure that the incentive compensation policies of banking organizations do not undermine the safety and soundness of their organizations. The proposal includes two supervisory initiatives. One, applicable to 28 large, complex banking organizations, will review each firm's policies and practices to determine their consistency with the principles for risk-appropriate incentive compensation set forth in the proposal. Second, supervisors will review compensation practices at regional, community, and other banking organizations not classified as large and complex as part of the regular, risk-focused examination process.

November 1, 2009 | CIT Bankruptcy Filing
CIT Group, Inc., files for bankruptcy protection under Chapter 11 of the bankruptcy code. The US Government purchased $2.3 billion of CIT preferred stock in December 2008 under the Troubled Asset Relief Program (TARP). The firm's prepackaged bankruptcy is expected to wipe out the equity stakes of CIT's current shareholders, including the US Government.

November 5, 2009 | Fannie Mae Press Release
Fannie Mae reports a net loss of $18.9 billion in the third quarter of 2009, compared with a loss of $14.8 billion in the second quarter of 2009. The loss resulted in a net worth deficit of $15.0 billion as of September 30,2009. The Acting Director of the Federal Housing Finance Agency submitted a request for $15.0 billion from the US Treasury to cover the deficit. Fannie Mae has lost a total of $111 billion since September, 2008, when the firm was placed under government conservatorship.

November 9, 2009 | Federal Reserve Press Release
The Federal Reserve Board announces that 9 of the 10 bank holding companies that were determined in the Supervisory Capital Assessment Program earlier this year to need to raise capital or improve the quality of their capital now have increased their capital sufficiently to meet or exceed their required capital buffers. GMAC was the one firm that to date has not raised enough capital to meet its required capital buffer.

November 17, 2009 | Federal Reserve Press Release
Citing continued improvement in financial market conditions, the Federal Reserve Board approves a reduction in the maximum maturity of primary credit loans at the discount window for depository institutions to 28 days from 90 days effective January 14, 2010. The Federal Reserve had lengthened the maximum maturity of primary credit loans first to 30 days on August 17, 2007, and then to 90 days on March 16, 2008.

December 1, 2009 | AIG Press Release
AIG announces that it has closed two transactions with the Federal Reserve Bank of New York. This agreement reduces the debt AIG owes the Federal Reserve Bank of New York by $25 billion in exchange for preferred equity interests in newly formed subsidiaries.

December 2, 2009 | Bank of America Press Release
Bank of America announces that it will repurchase the entire $45 billion of cumulative preferred stock issued to the US Treasury under the Troubled Asset Relief Program (TARP) after the completion of a securities offering.

Appendix 4
The Financial Crisis
Context of the Sale Transaction

Table of Contents

I. Overview of the Financial Crisis[1]

Much has been written about the credit crisis that erupted in 2007. During the run-up to the outbreak of the crisis, an explosive growth in the size of global credit markets was accompanied by a marked deterioration in the general quality of credit instruments. In my view, there were three phases of the crisis, marked by different underlying problems. In the first phase of the crisis, culminating during the summer of 2007, the problems were delinquencies and defaults in the mortgage market. The second phase lasted approximately from August 2007 to September 2008, and comprised a liquidity crisis that spread throughout the global financial system.[2] The third phase followed the demise of Lehman in September 2008.

A. Phase I: Credit Crisis in the Mortgage Market

Setting the stage for the credit crisis was a long term, but ultimately unsustainable increase in housing prices across the United States (and in several other major economies as well). Exhibit A.1 shows the long term increase in US housing prices accompanied by a long term declining trend in mortgage rates. Rising housing prices fueled easy credit conditions and increased mortgage lending to less creditworthy subprime borrowers.

During 2006, the Federal Reserve started to raise interest rates as it began to fear inflation, triggering a decline in US housing prices as shown in Exhibit A.2. Since many subprime mortgages originated in the 2001-2005 period had floating rates (i.e., were ARMs) with high step-up rates, the cost of meeting mortgage commitments rose to unsustainable levels for many low income households.

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[1] This section is excerpted from my forthcoming book, Anthony Saunders and Linda Allen (3rd Ed. 2010), CREDIT RISK MEASUREMENT: NEW APPROACHES TO VALUE AT RISK AND OTHER PARADIGMS, John Wiley & Sons.

[2] There were several phases of the liquidity crisis. For example, liquidity problems occurred during August and September of 2007. During the end of 2007 to the beginning of 2008, there was further tightening of global credit markets as the crisis continued. Moreover, the fall of major financial companies during the third phase of the crisis, which began in September 2008 triggered another global liquidity crisis.

The confluence of falling house prices, increasing interest rates and rising mortgage costs led to a wave of mortgage delinquencies and foreclosures in the subprime market that only reinforced the downward trend in house prices shown in Exhibit A.2 As this happened, the poor quality of the collateral and borrower creditworthiness that were underlying subprime mortgage pools became apparent, with default rates far exceeding those apparently anticipated by the rating agencies in setting their initial ratings for various tranches of subprime mortgage securitizations. These effects built throughout 2006 and through the middle of 2007. By February 2007, the percentage of subprime mortgages delinquent by 90 days or more was 10.09 percent, which was substantially higher than the 5.37 percent rate in May 2005.[3] The number of subprime mortgages that were more than 60 days delinquent was 17.1 percent in June 2007, 18.7 percent in July 2007 and over 20 percent in August 2007.[4] As borrowers had difficulty repaying their existing mortgages, they also found it impossible to refinance their existing loans prior to the higher step-up interest rates that were being triggered. By the fall of 2007, the National Association of Realtors was projecting a decline of 24 percent in new home sales and 8.6 percent in existing home sales.[5]

It soon became clear that the assumption that geographic diversification would protect mortgage portfolios from credit losses, as it had in the past, was no longer valid. Exacerbating the effect of a worldwide decline in real estate values was the failure by investors and banks to fully appreciate the impact of correlations across credit risk exposures, particularly in the event of a financial crisis. This weakness of credit risk assessment models was exacerbated by financial firms' pursuit of an "originate-to-distribute" model in which credit risk was partially removed from the balance sheet via asset securitization. Under the originate-to-distribute model,

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[3] Shenn, J., "Subprime Loan Defaults Pass 2001 Peak," *Bloomberg Markets,* February 2, 2007.

[4] Ng., S. and C. Mollenkamp, "Fresh Credit Worries Grip Market," *The Wall Street Journal,* November 2, 2007, page A1.

[5] Howley, K., "Realtor Group Lowers Forecast for Home Sales," *The Miami Herald,* October 10, 2007.

originating financial intermediaries had far weaker incentives to screen and monitor credit risk exposures, resulting in the deterioration in credit and underwriting standards.

Global financial markets are increasingly linked. For example, large financial intermediaries access domestic and international interbank money markets for the liquid funds they require to operate. Many interbank transactions take the form of either domestic repurchase agreements ("repo") or international Eurodollar transactions, both of which deal in US dollar denominated short term financings.[6] Repurchase agreements are fully secured by marketable securities, whereas Eurodollar transactions are unsecured.[7, 8] Other sources of short term financing include unsecured interbank loans (Federal funds) and commercial paper issues, which are unsecured debt instruments with maturities of less than 270 days. Because of these short-term financing links among financial intermediaries and markets, crises can spread rapidly.

Usually a crisis needs a particular "event" to trigger it. While in the case of the first phase of the crisis, it is hard to pinpoint one such event, some of the earliest credit losses took place during the spring of 2007. The second largest subprime lender in the U.S., New Century Financial, faced a large number of mortgage defaults, and filed for bankruptcy on April 2, 2007, after it was unable to meet its lenders' calls for more collateral on its credit lines. Bear Stearns High-Grade Structured Credit Master Fund (the investment vehicle for four Bear Stearns hedge funds heavily invested in subprime CMOs, CLOs and CDOs) and Dillon Read Capital

[6] The London Interbank Offer Rate ("LIBOR") is the interest rate charged on a short term Eurodollar loan.

[7] Under normal conditions, repurchase agreements limit acceptable collateral to high quality debt instruments that have stable values so as to assure that the market value of the collateral exceeds the loan value of the repurchase agreement at all times. The Federal Reserve is especially strict about acceptable collateral, but on September 14, 2008, as LBHI headed into bankruptcy, there was an unprecedented change so that even equities were accepted as collateral on some Fed repos.

[8] As Lehman came under increasing pressure, LBHI combined subordinate positions and second liens into structured securities of questionable marketability and value for the sole purpose of use as collateral in repo transactions. See Mike Keegan August 28, 2009 deposition, p. 88, "Most of it was a lot of zero valued securities which was principally the residuals and junior pieces of their – of Lehman's asset-backed securitization deals they had done through the years that they had held onto or didn't sell." For example, Lehman created a CLO called PINE CCS using loans on its own balance sheet without offering it to the public, instead using the senior tranches to pledge as collateral to raise funding.

Management (DRCM), a subsidiary of UBS, also experienced substantial losses during the spring of 2007. Exhibit A.3 shows that these events led to the dramatic worldwide increase in spreads on residential mortgage-backed securities (RMBS) during the summer of 2007, causing the prices of RMBS to fall throughout the world.

Investors began to lose confidence in the quality of credit ratings and the rating agencies, especially regarding the quality of the investment grade rated tranches of asset-backed securities (ABS). On October 11, 2007, Moody's downgraded more than 2,000 subprime RMBS with an original value of $33.4 billion.[9] All private debt issues – from the interbank market to the corporate bond market, including the so-called investment grade market – were negatively affected by a "flight to quality" to default-risk free US government securities. This resulted in falling prices (rising interest rates or "credit spreads") on privately issued debt securities (including, but not limited to ABS) and rising prices and lower rates on government issued debt securities, such as US Treasury securities. As noted by the Bank of England, "This fundamental uncertainty about the value of ABS began to cause problems in a wider set of markets. The near closure of primary issuance markets of collateralized loan obligations, and an increase in risk aversion among investors, left banks unable to distribute leveraged loans that they had originated earlier in the year."[10] As a result, credit markets throughout the world suffered from high spreads and drastically curtailed liquidity.

B. Phase II: The Crisis Spreads and Becomes a Liquidity Crisis

Phase II of the financial crisis appeared to begin towards the end of the summer of 2007 when a German savings bank IKB, and a British bank Northern Rock failed.[11] Although both

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[9] "Bank's Struggles Show Fallibility of Models," *Wall Street Journal,* November 5, 2007, p. C2.

[10] Bank of England, *Financial Stability Report,* October 2007, Issue 22, page 19.

[11] Northern Rock's mortgage portfolio was not exposed to the subprime market, and the five year credit default swap premium on Northern Rock stayed relatively low until the end of July. However, the bank was vulnerable because it depended on purchased funds for the bulk of its liabilities. Thus, according to the Bank of England, it was the shutdown of the securitization market and turmoil in the short term funding

were bailed out by their respective regulatory agencies, the extent of their credit exposure problems caused by the decline in ABS values caught many investors by surprise and induced a second stage of the crisis – a liquidity crisis. For example, the major US subprime mortgage lender, Countrywide, announced in August that it was drawing down on backup lines of credit because of its growing losses. Ultimately, a liquidity run on Countrywide was stemmed only after a $2 billion equity investment by Bank of America on August 23, 2007. Financial intermediaries that used their RMBS portfolios to raise funds, for example asset-backed commercial paper (ABCP) issuers, began having difficulty refinancing their short term issues because of investor concerns about the quality of the underlying collateral of subprime mortgages and other assets, despite the purported AA or AAA ratings these issues may have received from the rating agencies.

The impact of the Phase II liquidity crisis can be seen in the widening one and three month spreads between the London Interbank Offer Rate ("LIBOR") and the Overnight Indexed Swap ("OIS") rate, where the OIS is the geometric average of overnight interest rates over a specific time period). This widening spread, shown in Exhibit A.4, is of importance because the Fed uses it to measure "stress" in money markets. The LIBOR-OIS spread typically averaged 10 basis points.[12] However, Exhibit A.4 shows that the spread reached historically high levels (up to 100 basis points) during the fall of 2007.[13]

As the scale of the liquidity crisis spread far beyond the subprime market, central banks became increasingly concerned and opened their discount windows (central bank lending facilities) to banks and other financial institutions that were liquidity constrained. By August 10,

market (i.e., liquidity risk) that brought down Northern Rock, not credit risk in the bank's mortgage portfolio. See Bank of England, *Financial Stability Report,* October 2007, Issue 22, pp. 10-12.

[12] A basis point is .01 percent of one percent – one hundred basis points comprise one percentage point.

[13] During the week of September 15th, 2008, the LIBOR-OIS spread reached unprecedented levels, more than double already heightened levels, indicating the extreme market turbulence and illiquidity during the period leading up to the Sale Transaction.

2007, the following central bank liquidity injections into the financial system had taken place: US$43 billion by the Federal Reserve, US$191 billion by the European Central Bank and US$8.4 billion by the Bank of Japan. On November 1, 2007, the Federal Reserve injected an additional "$41 billion in temporary reserves to the banking system, the biggest one-day infusion since September 2001."[14] Further, the Federal Reserve lowered the discount rate on August 17, 2007 by 50 basis points to 5.75 percent. On September 18, 2007, the Federal Reserve lowered the Federal funds rate by 50 basis points to 4.75 percent, and another 25 basis points to 4.5 percent on October 31, 2007 and again another 25 basis points on December 11, 2007 to 4.25 percent. When these rate cuts did not appear to be sufficient to stimulate economic activity, on January 22, 2008, the Fed lowered the Fed funds rate another 75 basis points. A week later, on January 30, 2008, the Fed lowered rates another 50 basis points to 3 percent. However as Exhibit A.4 shows, even as the Fed lowered rates, the liquidity stresses and flight to quality continued as reflected in the widening spread between LIBOR and the Overnight Index Swap rate.

As providers of back-up sources of liquidity via lines of credit and loan commitments to financial firms such as Special Purpose Vehicles (SPVs), Structured Investment Vehicles (SIVs) and hedge funds, the banking system was forced to absorb much of the impact of the absence of liquidity in global credit markets. For example, as rollovers of ABCP met with resistance, the SIVs began to draw down on their committed lines of credit with major banks (often their parent banks) to meet their funding needs. Together with the inability of banks either to securitize or syndicate their own pipelines of newly originated lending, this created an unintended expansion of banks' balance sheets. For example, the Bank of England issued a Financial Stability Report in October 2007 in which it estimated that British banks were forced to absorb an additional GBP147.4 billion in risk-weighted assets at the end of 2007, representing 12 percent of the banks'

[14] Tett, G., P.J. Davies, and S. Ishmael, "New Fears Over Subprime Fallout," *Financial Times,* November 2, 2007, page 1.

wholesale lending base.[15] This crowded out much new lending and stressed the capacity constraints of the banking system, just at a time when liquidity risk exposures were climbing.

C. Phase III: Lehman's Failure and Its Aftermath

The third stage of the crisis was induced by the unexpected events of the weekend of September 13-14, 2008 – dubbed by the *Wall Street Journal* "the weekend that Wall Street died" – which culminated in the bankruptcy of LBHI. Prior to that week, large financial institutions, such as Lehman, were thought to be "too big to fail" (TBTF) because of their importance to the operation of the global financial system. That is, it was widely thought that the government would not let any of the largest financial institutions fail because of the risk that such losses would negatively impact the entire financial system.

Since Lehman was widely believed to have an implicit TBTF guarantee, it came as a major shock to financial markets that US regulators did not act to offer it a bailout package. The resulting negative impact of the decision not to bail out Lehman was severe – extending to all financial markets. Concerns about inconsistent application of a TBTF policy, along with the rising costs of bailout packages, contributed to the ensuing downturn that comprises the third phase of the crisis. During this phase, credit risk and liquidity risk were again exacerbated, so that the third phase accentuated both Phases I and II problems.

In addition to an uncertain TBTF governmental policy and the inconsistent application of intervention policies (e.g., the bailouts of Bear Stearns and AIG, but not LBHI), it became apparent that there were fundamental operational problems with many securitizations, further increasing the credit and liquidity risks in financial markets. Specifically, fundamental structural problems in the underwriting process of MBS and other asset-backed securities were becoming increasingly clear. For example, when investors in securitized assets attempted to foreclose on underlying loan collateral, they often found that the underwriters, in their hurry to originate and

[15] Bank of England, *Financial Stability Report,* October 2007, Issue 22, page 33.

distribute during the boom period, failed to perfect the mortgage liens. As a result, investors found that some securitizations did not have sufficient identification information or legal title to the underlying assets necessary to restructure securitization packages, and that in some deals the right to restructure the securities was limited by covenants. For example, Gretchen Morgenson of the New York Times states:[16]

> [T]he impact of another lax practice is only beginning to be seen. That is the big banks' minimalist approach to meeting legal requirements – bookkeeping matters, really – when pooling thousands of loans into securitization trusts."
>
> Stated simply, the notes that underlie mortgages placed in securitization trusts must be assigned to those trusts soon after the firms create them. And any transfers of these notes must also be recorded.
>
> But this seems not to have been a priority with many big banks. The result is that bankruptcy judges are finding that institutions claiming to hold the notes that back specific mortgages cannot prove it....
>
> No one knows how many loans went into securitization trusts with defective documentation. But as messes go, this one has, ahem, potential. According to Inside Mortgage finance, some eight million nonprime mortgages were put into securities pools in 2005 and 2006 and sold to investors. The value of these loans was $797 billion in 2005 and $815 billion in 2006.
>
> If notes underlying even some of these mortgages were improperly assigned or lost, that will surely complicate pending legislation intended to allow bankruptcy judges to modify mortgage terms for troubled borrowers....
>
> Samuel L. Bufford, a federal bankruptcy judge in Los Angeles since 1985, has overseen some 100,000 bankruptcy cases. He said that in previous years, he rarely asked for documentation in a foreclosure case but that problems encountered in mortgage securitization have made him become more demanding....
>
> 'My guess is it's because in the secondary mortgage market they have been sloppy,' Judge Bufford added. 'The people who put the deals together get paid for the deal, but they don't get paid for the paperwork.'

[16] G. Morgenson, "Guess What Got Lost in the Pool?" *The New York Times,* March 1, 2009, page C1, C2.

> These fundamental operational problems made investors concerned about purchasing ABS (virtually at any price) for fear that deficient underwriting would prevent them from restructuring these securities in the future.

The Sale Transaction occurred during the start of the third phase of the crisis, at a time of substantially enhanced credit, liquidity, and operational risk exposures. The enormous degree of uncertainty about asset valuations at this stage of the crisis is demonstrated by the dramatic increases in market volatility over the final months of 2008. Exhibit A.5 shows that during the time leading up to the Sale Transaction, the Chicago Board Options Exchange (CBOE) Volatility Index VIX® rose to heights unseen since the index's introduction in January 1990. The VIX® is commonly referred to as the "investor fear gauge."[17] The higher the index, the more fear in the market, so that the extraordinarily high levels of the VIX® during the third phase of the crisis indicates unprecedented levels of fear and uncertainty among investors. Exhibit A.5 also shows that the VIX® did not reach such levels during earlier crises. For example, the VIX® was lower during the 1998 Long Term Capital Management/Russian government default crisis and the high tech crisis in March 2000, and even during the terrorist attacks of 9/11. Specifically, the VIX® during Phase III of the crisis was almost double the level seen during the worst previous post-1990 crisis, indicating that financial market conditions during the period when Barclays acquired LBI were far more precarious than in previous crises. Under such circumstances, the Sale Transaction exposed Barclays to substantial risk, and the Court's approval reflected very real contemporaneous concerns about the need to avoid further panic in the financial system. If the Sale Transaction had not been approved, it is highly likely that the fear index would have risen even higher than it actually did.

II. Fragility and Risks of Major Financial Institutions

There is a reason why the current crisis is frequently called the worst financial crisis since the Great Depression. The reason is not because there have been no severe financial crises in

[17] CBOE White Paper VIX® 2003.

recent years. In fact, there have been many, including: the Latin American debt crisis (1980s), the savings and loan crisis (1989 – 1991), the Mexican debt crisis (1994-1995), the Asian financial crisis (1997-1998), the Russian financial crisis and the demise of Long Term Capital Management (1998), and the bursting of the dot.com bubble (2001). Rather, the current crisis has been the worst since the Great Depression because of the threat it posed (and still poses) to the viability of financial institutions of all types, not only in the US but around the globe. That threat was never more serious than in September of 2008. In this section, I briefly recount the rapid succession of failures, forced mergers, and rescues that occurred around the time of the Sale Transaction, and analyze the fundamental damage to the underlying business model and financial condition of the financial institutions that managed to survive.

The fragile condition of Lehman's North American broker/dealer operations made its viability as an acquisition highly uncertain. In September of 2008, LBI was facing an intensifying liquidity crunch and questions were being raised about the integrity and accuracy of LBI's valuations in terms of marking to market their asset portfolio, particularly in the wake of the Lehman's $3.9 billion third quarter announced loss. The September 9, 2008 decision of LBI's clearing agent, JP Morgan Chase, to demand $5 billion in additional collateral in order to keep transacting with the firm was also a heavy blow to LBI's broker/dealer's operations.

During the week of September 15th, it became apparent that LBI would not be viable without either an acquisition or a TBTF bailout by the government. Since TBTF funds had been categorically ruled out, it is my opinion that LBI would have been unable to last very long without the Barclays acquisition (see Section II of this report).

At the time, regulators were concerned about the viability of major financial institutions because of their inherent fragility. In the next section, I describe the reasons for the fragility of various forms of financial institutions and the impact of this fragility on non-financial firms.

A. Commercial Banks, Thrifts, and Mortgage Companies

1. The Traditional Banking Model

The traditional view of a bank is that of an institution that issues short term deposits (e.g., checking accounts and certificates of deposit) that are used to finance the bank's extension of longer-term loans (e.g., commercial loans to firms and mortgages to households). In this world, the balance sheet of a bank fully reflects the bank's activities. Typically, the bank's deposits are recorded on the balance sheet as liabilities, whereas the bank's assets include loans that are originated by the bank and are held to maturity. Despite the simplicity of this structure, traditional banking was hardly free of risk. Indeed, the traditional bank organizational structure tended to expose the bank to considerable amounts of liquidity risk, interest rate risk and credit risk. For example, suppose a number of depositors sought to withdraw their deposits simultaneously. In order to meet its depositors' withdrawal demands, the bank would be forced to raise cash, perhaps by liquidating assets. This might entail the selling of illiquid, lòng-term loans into a falling market. Thus, the bank might experience a loss because of the liquidity risk associated with financing long-term, illiquid assets (loans) with short-term, readily withdrawn liabilities (deposits).

An illustration of the exposure of traditional banks to interest rate risk occurred in the early 1980's when interest rates increased dramatically. Banks and thrifts found that their long-term fixed rate loans (such as 30 year fixed rate mortgages) became highly unprofitable as deposit rates rose above mortgage rates and banks earned a negative return or spread on those loans – that is, the cost of financing exceeded the return on the investment.

Traditional banking has always been concerned with credit risk. Since traditional banks and thrifts tended to hold loans until maturity, they faced the risk that the financial condition of the borrower would deteriorate over the life of the loan – perhaps resulting in a loan default. This would reduce the cash inflows from the bank's assets, although the bank would still have to pay

interest on its deposit and other liabilities used to fund the loan. All of these risk exposures are priced into the terms of every transaction. For example, loan rates include a risk premium for the credit risk, interest rate risk, liquidity risk, etc. associated with the transaction. The riskier the deal, the higher the loan rate should be set.

In addition to increases in the risk exposures inherent in traditional banking, regulatory requirements began to tighten in the late 1980s – 1990s. For example, international Basel capital regulations introduced risk-based capital standards that required banks to hold more capital against risky loans and other assets (both off and on the balance sheet). Capital is the most expensive source of funds available to banks because it is comprised mostly of equity. Equity holders are the most junior claimants on the bank's assets, and thus common stock acts as a cushion against unexpected losses in the event of an unanticipated crisis. When the risk of catastrophic events increases, then additional economic capital is required, thereby increasing the cost of funds. Since the bank's profits are determined by the spread, i.e., the difference between the return on assets minus the cost of funds, the impact of increased capital requirements (whether regulatory or economic capital) is to reduce spreads, and therefore the bank's profitability.

As a result, the traditional model of banking frequently offered an insufficient return (spread) to compensate banks for assuming substantial risk exposures. Therefore, beginning in the 1970s, banks innovated a number of new instruments and strategies to reduce these risks and/or increase their returns. One such strategy of much relevance in understanding the development of conditions leading to the global financial crisis is asset securitization.

2. *Securitization and the Traditional Banking Model*

Securitization involves a change of strategy from a traditional bank's policy of holding the loans that it originates on its balance-sheet until maturity.[18] Instead, securitization consists of

[18] Asset securitization involves all types of loans: mortgages, business loans, student loans, auto loans, credit card receivables, etc. Because the origins of the financial crisis were in mortgage delinquencies, I focus on mortgage-backed securities (MBS) in this report.

packaging loans into newly created securities and selling these new ABS to investors. By packaging and selling loans to outside parties, the bank can potentially remove a considerable amount of the liquidity, interest rate and credit risks from its asset portfolio, thereby transferring these risks to outside investors such as pension funds and mutual funds. Rather than holding the mortgages on the balance sheet until maturity, shortly after origination, the bank sells these to a SPV off the balance sheet, which pays for the assets by issuing securities ABS based on the cash flows generated by the purchased assets. Thus, securitization transfers risk from the bank's balance sheet to the holders of the ABS.

Despite securitization's risk mitigation, one not need look very far for examples of bank failures and forced acquisition among leaders in the process of originating ABS, including MBS – e.g., IndyMac, Countrywide, WAMU and Wachovia. In large part, these and other banks were brought down by their own holdings of MBS, as well as the mortgages in the pipeline toward securitization. For example, Exhibit A.6 shows that Countrywide, the largest subprime mortgage originator in the US at the start of the crisis,[19] had excessive (relative to peer group banks) concentrations of 1-4 family residential mortgages on its books during the 2003-2006 build up to the crisis.

Securitization increased rather than mitigated banks' risks through the creation of off-balance sheet entities such as SIVs. Loans, ABS and MBS were down streamed by banks to SIVs that issued short-term liabilities (ABCP) to finance their acquisition, as shown in Exhibit A.7. Thus, in essence the SIV itself became an unregulated off-balance sheet bank, holding assets until maturity that were fully funded by short-term liabilities (ABCP) carrying interest obligations independent of the cash flows received on the SIV's assets (e.g., loans and ABS).

However, a major difference between a SIV and a traditional bank is that the SIV cannot issue deposits to fund its asset base (*i.e.,* it's not technically a "bank"), but rather relies on

[19] Countrywide accounted for almost a fifth of all mortgages made in the US at the start of the financial crisis. Source: Dickson, S., "Countrywide Says 'Disruptions' May Hurt Profit, Bloomberg.com, August 10, 2007, http://www.bloomberg.com/apps/news?pid=20601087&sid=awWmNtGguiq0&refer=home

suppliers of "purchased funds" or "hot money" (such as ABCP) that are prone to "run" at the first sign of trouble. These wholesale and unsecured interbank lenders and commercial paper buyers had the incentive to withdraw funds (or refuse to renew financing) quicker than traditional "core" depositors, who may rely on their bank deposits for day-to-day business dealings or may be protected by government deposit insurance. For example, when the value of the SIVs' asset portfolios declined at the onset of the financial crisis, the ABCP market virtually shut down, new ABCP issues were canceled, and SIVs were forced to sell assets at fire sale prices into illiquid markets in order to meet short-term debt obligations. Alternatively, some SIVs relied on direct funding from their parent bank, which effectively put the MBS and other assets back on bank balance sheets (a process known as re-intermediation). Asset sales into declining markets exacerbated the decline and spread the crisis throughout global financial markets, and re-intermediation tied up deposit and other bank funding. However, it is important to bear in mind that Barclays PLC had a very retail, core deposit base.

B. Investment Banks

The traditional investment banking model, such as LBHI, differs from the traditional commercial banking model. Instead of accessing a stable core deposit base to originate loans that are held to maturity, the traditional investment bank earns fee income by providing services such as underwriting and prime brokerage services, which include securities lending and clearing, as well as profits from trading positions financed by short-term funding. That is, the investment bank typically makes relatively short-term investments, either on behalf of its clients or in its proprietary trading account, thereby betting on market movements.[20] These short-term holdings are financed using short-term purchased funds, such as commercial paper and repurchase

[20] Long positions are bets that the market price will rise, whereas short positions profit from price declines. These positions can be undertaken either using actual securities or synthetically using derivatives.

agreements.[21] Much of this money is provided by institutional investors such as mutual funds and hedge funds, who use major investment banks as prime brokers. During normal market periods, this is a profitable model as the cost of short-term funds tends to be quite low, thereby keeping the investment bank's costs low and making it profitable for the investment bank to buy higher yielding assets. However, as noted in my earlier discussion of the liquidity phase of the crisis, reliance on short-term funding carries the risk that these sources of funding will either dry up or their cost will increase when financial conditions deteriorate and trading book losses mount.

When Goldman Sachs and Morgan Stanley switched to bank holding company charters on September 22, 2008, they implicitly acknowledged this inherent weakness in the traditional investment banking model. As bank holding companies, Goldman Sachs and Morgan Stanley could attract FDIC insured deposits and discount window borrowings that act as stable sources of financing, alleviating their dependence on volatile short-term purchased funds.[22] In addition, Bank of America acquired Merrill Lynch on Monday, September 15, 2008, giving the investment bank access to Bank of America's extensive retail deposit base. Indeed, the liquidity crisis triggered by LBHI's bankruptcy demonstrated the fragility of the traditional investment banking model.

The potential demise of Goldman Sachs and Morgan Stanley, as well as the failure of the traditional investment banking model, was precipitated by a loss of confidence. Specifically, the Lehman failure, particularly in the days before the Barclays acquisition was approved, led market participants to withdraw their funds and refuse to trade at all.

The loss of confidence in the banking system could have undermined the integrity of the two major US clearing banks: Bank of New York Mellon and JP Morgan Chase. These banks

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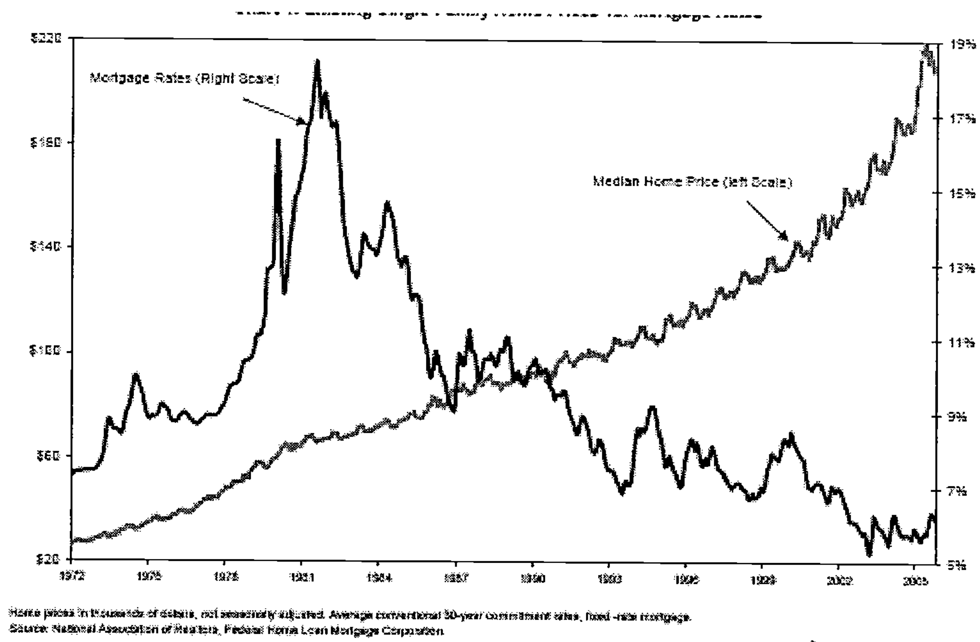
[21] A repurchase agreement allows an investment bank to borrow against collateral (securities) transferred to a counterparty. This transaction is typically reversed within a short time period – from a week to three months. Moreover, the collateral is marked-to-market on a daily basis.

[22] Similarly, American Express adopted a bank holding company charter in November of 2008. GM's financing arm, GMAC, received approval to become a bank holding company in December of 2008.

stand at the center of money markets, arranging and clearing transactions in overnight markets such as the repo market on behalf of the Federal Reserve and other US counterparties.[23] In particular, they hold the securities backing tri-party repo transactions which provide collateralized financing for broker/dealer operations.

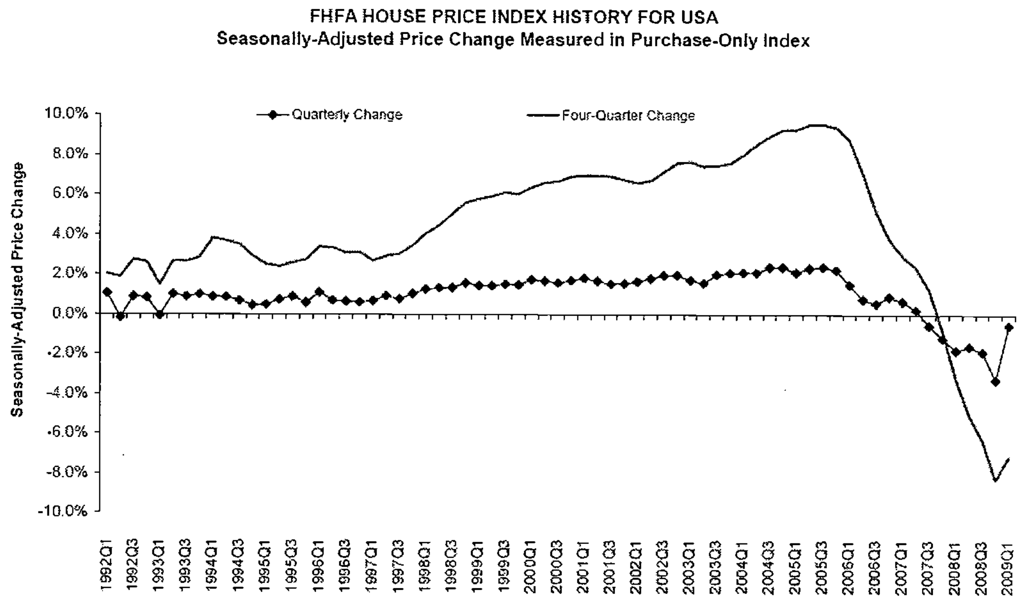
[23] For example, JP Morgan Chase and the Bank of New York Mellon are the only banks that deal directly with the Fed in tri-party repos, but a reform may include "adding other banks to the two existing custodian banks." E. Comlay and K. Cooke, "US Clearing Banks Submit Repo Reform Proposals to the Fed," *Reuters*, http://www.reuters.com/article/idUSN10606102200907l0

Exhibit A.1
Housing Prices and Mortgage Rates: 1972-2006



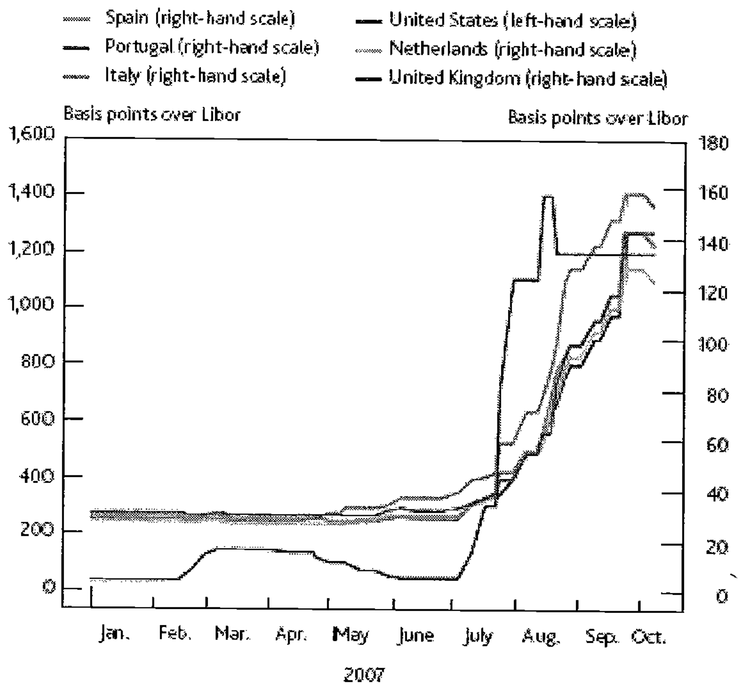
Notes: Median US home prices in thousands of dollars, not seasonally adjusted. Average conventional 30-year commitment rates on fixed rate mortgages.
Source: Standard & Poor's, "S&P/Case-Shiller® Metro Area Home Price Indices," May 2006, page 27.

Exhibit A.2



Source: Federal Housing Finance Agency News Release, May 27, 2009, page 6.

Exhibit A.3
Residential Mortgage-Backed Securities Spreads[a][b]

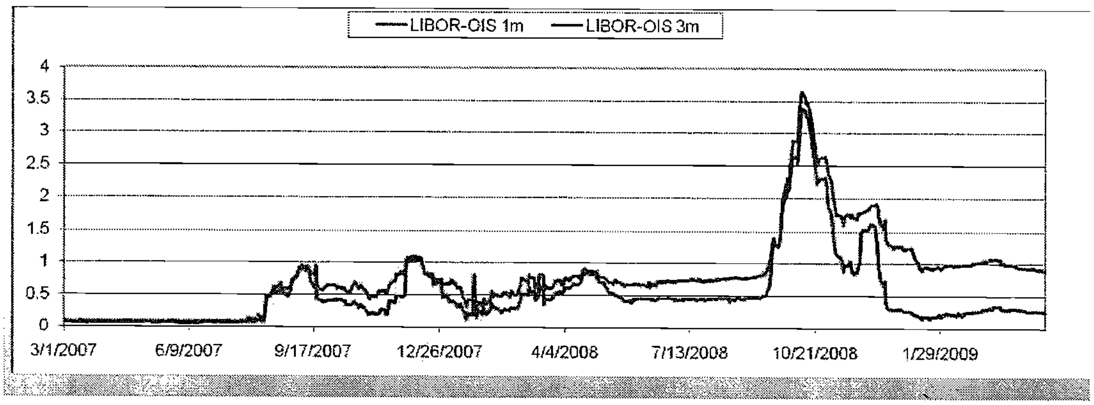


Source: Lehman Brothers.

(a) A-rated five-year spreads over Libor except for Spain which uses ten-year spreads over Libor.
(b) All countries' data are prime residential mortgage-backed securities except for the United States which uses home equity loans, which will tend to be of lower quality.

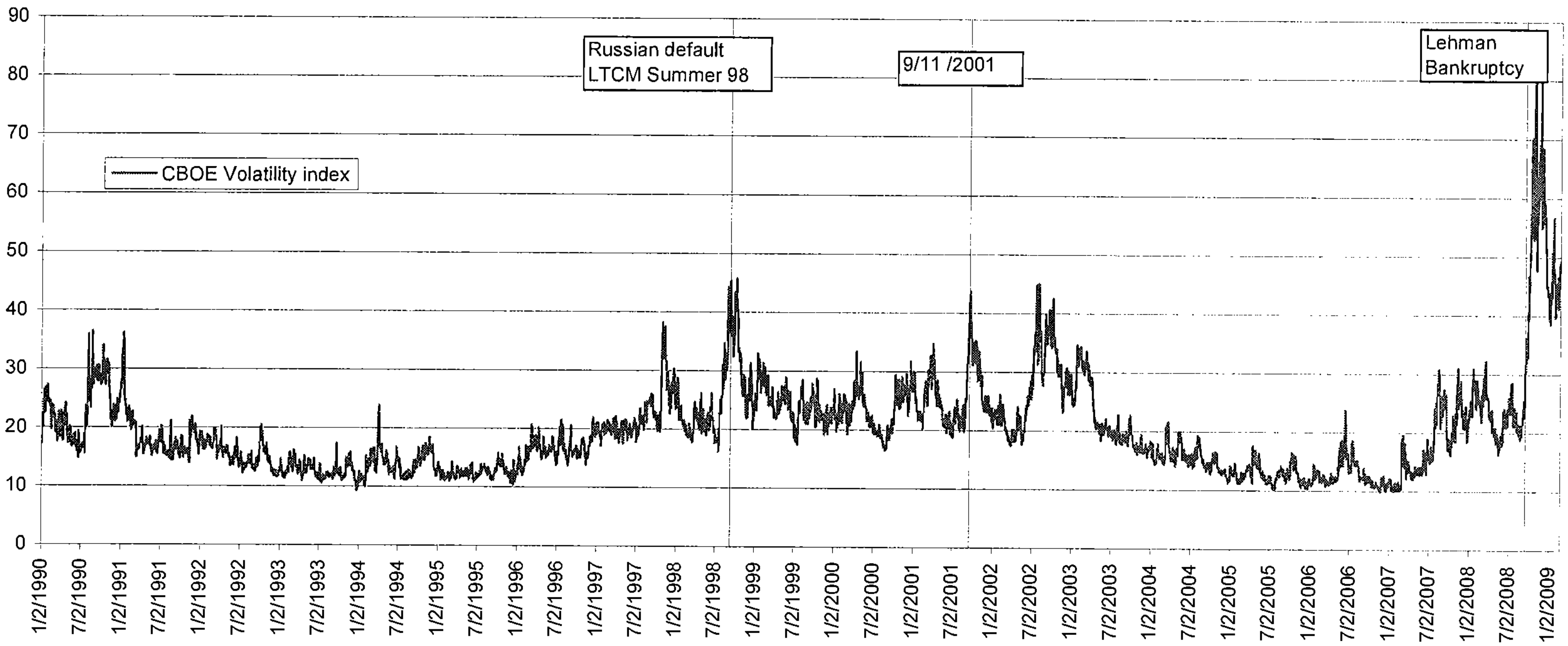
Source: Bank of England, *Financial Stability Report,* October 2007, Issue 22, page 7.

Exhibit A.4
The Increasing Cost of Short-Term Liquidity
The LIBOR – Overnight Index Swap Rate



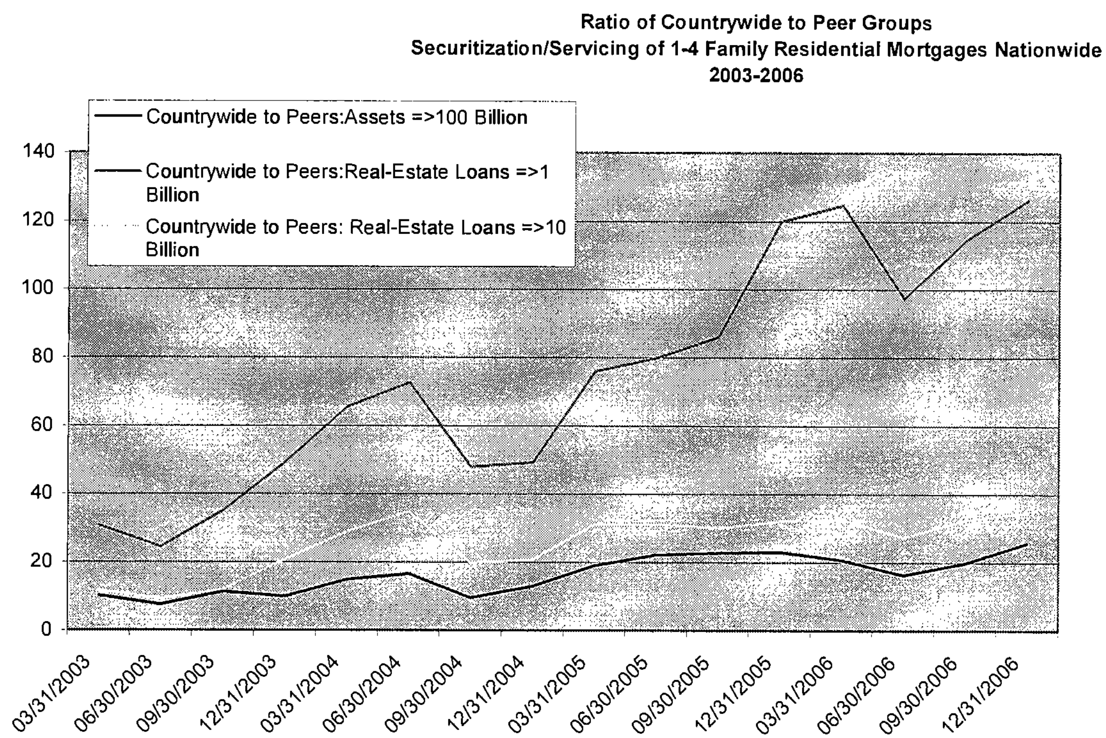
Source: *Domestic Open Market Operations During 2008*, Federal Reserve Bank of New York, Markets Group, January 2009, Chart 1.

Exhibit A.5
CBOE Volatility Index
1990-2009



Source: Yahoo Finance

Exhibit A.6



<u>Note</u>

Outstanding principal balance assets sold and securitized with servicing retained or with recourse -- Form Y-9C, Schedule HC-S, item no. 1, as a fraction of total real estate lending (Form Y-9C, Schedule HC-C, item no. 1). Each line represents the ratio of Countrywide's values to the averages of each of its peer groups. The three peer groups of bank holding companies have: (1) total assets of $100 billion or more, (2) real estate loans of $10 billion or more, and (3) real estate loans of $1 billion or more.

<u>Source</u>: FFIEC Consolidated Financial Statements for Bank Holding Companies (FR Y-9C), website of Federal Reserve Bank of Chicago.

Exhibit A.7
The Securitization Process